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AUTHOR Shields, Patricia M.
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ABSTRACT

A comprehensive investigation of the military recruitment process during the Vietnam era focused on multiple facets of the equity issue to assess the impact of military manpower policies. Using data from a sample of young men in the National Longitudinal Surveys (NLS) three questions were addressed: who served, who was drafted, and who chose to enlist. The effects of ten determinants of military service (health conditions, mental ability, dependents, education, draft pressure, socioeconomic status, residence, earnings, unemployment, and knowledge of the world of work) on the probability of serving, enlisting, and being drafted were studied. Formulated hypotheses were tested by multiple classification analysis and logit. Separate analyses by race were also conducted. Results of the study included these: fathers served at rates significantly below average; racial inequalities in implementation of the health deferment existed; the military did not draw disproportionately from any one social class when fulfilling its manpower demands; draft pressure was the strongest predictor (the manpower needs of an intensifying war may have been the single most important factor in negating some of the earlier inequitable draft policies); and potential wage was not significantly related to black enlistment, though it was a strong predictor among whites. (JH)

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The Determinants of Service in the Armed Forces During the Vietnam Era

Patricia M. Shields
The Center for Human Resource Research
The Ohio State University
Columbus, Ohio

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CHAPTER ONE

INTRODUCTION

Introduction

The purpose of this study is to explore the determinants of service in the armed forces during the Vietnam era. A conceptual framework incorporating a host of environmental, socioeconomic, and institutional factors is developed. Then a number of hypotheses derived from this framework are empirically tested. The hypotheses are tested in a multivariate framework using a national sample which is an accurate representation of the population of young men who provide the military manpower during the Vietnam era.

The Vietnam War and the young men who staffed the armed forces during this conflict have aroused public debate and turmoil unlike few issues of modern times. The policy decisions of the U.S. Government and its agencies (DOD, Selective Service, etc.) were at the center of the controversy. Of special concern was the Selective Service draft policy. The draft was the cornerstone of defense manpower policy because it made military service compulsory or induced enlistment for some young men while exempting and deferring others. Since much of the bitterness surrounding the war has subsided, the Vietnam era military recruitment process can be reviewed objectively. Special attention must be paid to the equity issue, for the government asked some young men of this era to postpone civilian life plans as well as to jeopardize their life and health.

Young men of the Vietnam era were born and reached maturity during a period characterized by international crisis (WW II, Korea, Berlin, Cuba). The draft was seen as a necessary policy variable, for it permitted able young men to be drawn quickly into service in event of an emergency. During this period "national security" played a major role in shaping defense manpower policy. In addition, armed forces human resource procurement policy also responded to changing attitudes towards four major issues: costs; compulsion; equity; and the impact of military manpower policy on nonmilitary social goals;[1] e.g., education, agriculture, and the elimination of poverty. Given this broad range of issues it is not surprising that defense manpower policies have been the object of recurring Congressional and public debates.

Throughout the 1950's the equity issue seldom received public review. Nearly everyone served. At that time the armed forces required approximately 70 percent of the nation's young men to meet its manpower needs.[2] However, in the early 1960's, as the first of the baby boom children reached maturity, a manpower surplus began to appear. This abundance of manpower created serious problems in the choice of who was to serve. During this period of relative peace, the Selective Service took on a new function or purpose. It deferred men in order that they might train and study and in this way serve the national interest. Policies such as the Selective Service student, hardship and occupational deferments in concert with increasingly rigorous armed forces minimum health and mental ability standards reduced the 1-A (available for service) pool.

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[1] Gerhart (1971, p. xiv).

[2] Davis and Dolbeare (1968, p. 130).

The equity of the draft became a bitterly debated national issue as draft calls increased in response to the escalating Vietnam War and as the number of reported weekly casualties reached one hundred.[3] The Selective Service and its draft classification system came under attack because the draft classification criteria were felt to exclude systematically upper class youth to the detriment of the middle and lower social classes. College deferments were seen by many as the principal means to this end.

The equity issue continually confronts students of human resource policy. The role and importance of equity in shaping policy decisions is not clear. Nevertheless, equity as a policy priority takes on distinctive significance when society demands that a small segment of the population risk injury and death. Rescher, in Distribution Justice[4], places the equity question within the context of "justice".

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[3] Useem (1973, pp. 99-113).

[4] Rescher (1966, pp. 73-85).

He describes the challenge of justice in our society as the ability to balance a mixture of goals (e.g., equality, need, effort, the common good). During the Vietnam era, due to manpower surpluses, policy makers had to achieve a harmony between equality in the recruitment process and national security (the common good).

Equality in a conscription system implies an equal likelihood of serving among young men of the relevant age. However, equality is not monolithic, and the dimensions along which equity was measured became key aspects of national attention. In our society, race and social class are important perspectives from which to judge equity. Do individuals of different races and social classes face the "risk" and have the opportunity to enjoy the benefits equally? The student and occupational deferments which were introduced to serve the "common good" were thought by some to destroy equity along the dimension of social class. An objective of this study is to address aspects of ex-ante[5] equity. Since the draft often includes[6] the enlistment decision, an important question concerning the equity of the draft is not just who was drafted but rather the larger question of who served.[7]

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[5] Ex-ante equity deals with the equal probability (or risk) of service. This study does not deal with aspects of ex-post equity or fairness in respect to conditions of service. Candby (1972, p. 22).

[6] A 1970 Defense Department study estimated that 50 percent of all Army and Air Force volunteers were "reluctant volunteers" (Helmer 1973, p. 3). Clearly, over the history of the Vietnam conflict the proportion of reluctant volunteers varied.

The Present Study

The Objectives: Three Questions

The present study represents an attempt to explore in a comprehensive manner the military recruitment process of the Vietnam era. This paper deals with three related questions: first, who served, secondly, who was drafted and finally, who chose to enlist during the Vietnam conflict. The exploration of all three questions is the most comprehensive manner of examining the military recruitment process. The use of this framework enables investigation of the multiple facets of the equity issue. In addition it is possible to assess some of the impact of military manpower policies during the Vietnam era.

A conceptual framework is developed which takes into account a host of sociological, institutional and economic factors. Previous research which has studied enlistment focused upon economic variables. The enlistment model in the present study enables one to assess the impact of these factors in a new way. Finally all three models are tested using a multivariate technique which enables the evaluation of the net impact of each of a set of independent explanatory factors on the likelihoods of enlistment, being drafted and serving.

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[7] An aspect of equity not dealt with in this study is how the "draft" altered the plans and behavior of those who did not serve.

The study of enlistment is of special policy concern because currently the armed forces rely upon volunteers to meet their manpower needs. Previous research efforts using different methodologies have come to opposite conclusions concerning the impact of economic factors, such as military-civilian earnings differentials, on enlistment. This study will help resolve some of the conflicts and questions surrounding the impact of earnings on enlistment. Finally, even though enlistment is voluntary, there are equity dimensions to be explored because the draft motivated many enlistments.

Conscription is a direct governmental intervention in a young man's life. It is often a disruption in the early stages of career development. In addition, a draftee generally entered the Army and faced a greater likelihood of infantry and combat duty, which in turn led to a greater probability of injury or death.[8] Hence, the question of who was drafted has a unique equity aspect. Furthermore, past research has not explored the determinants of being drafted in a multivariate context.

The question of who serves is interesting because it represents a comprehensive overview of the recruitment process. In addition, economic variables are included in this model. The presence of economic variables in the "who serves" model tests the impact of the civilian wage under difficult circumstances; e.g., a war situation with draftees included in the model.

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[8] In 1967 both the Marine Corps and the Navy met manpower demands through induction. However, even in this year the large majority of inductees went to the Army. Gerhart (1971, p. 277).

This Study as a Contribution to the Literature

This study contributes to the existing literature in several ways. First, it examines the impact of civilian earnings and unemployment in a manner which overcomes many of the weaknesses in the current literature. Second, this study is the first to employ multivariate analysis in examining the factors associated with conscription. Third, the sample used in this study is an accurate representation of the population of male youth who were chosen to serve. Fourth, separate analysis by race is conducted. The majority of past research used exclusively white samples or made no racial distinction. Fifth, the study relies on pre-service characteristics measured at the time of draft eligibility and, in this way, insures the correct temporal sequence. Sixth, analysis is conducted using both logit and Multiple Classification Analysis. The results of the two methods are compared for consistency. Finally, the data base and the research objectives (three questions) enable one to explore the equity issue in the several contexts mentioned above.

The Data

The sample selected for analysis is a subset of the panel of young men in the National Longitudinal Surveys (NLS). The NLS panel is a national probability sample of the civilian noninstitutional population of males who were 14 to 24 years of age when first interviewed in the fall of 1966. The subset consists of respondents with the following characteristics: (1) 14 to 20 years of age in 1966 and (2) nonveterans when they entered the sample in 1966. Confining this sample to respondents with these characteristics ensures that all respondents were nonveterans when first interviewed. Interviews were conducted annually (1966-1971 and 1973) during a period that corresponded closely to the Vietnam era (1964-1973). Therefore, the age and the national representativeness of the NLS young men's cohort allow an accurate representation of the population of young men providing the military manpower during the Vietnam era. In addition, the NLS contains enough sample cases to make possible separate reliable statistical analysis for black youth.

The Plan of the Study

The next chapter presents a conceptual framework within which the objectives of the study are analyzed. In developing the framework, the relevant past research is reviewed and hypotheses are put forward. Chapter III explores methodological aspects of the study including operationalization of the dependent and explanatory variables and a discussion of the statistical technique employed. In Chapter IV the empirical results are presented. In the concluding chapter the research findings are further discussed and policy interpretations are drawn.

CHAPTER TWO

CONCEPTUAL FRAMEWORK

Introduction

In this chapter we present the conceptual framework for investigating the three questions: (1) who served, (2) who enlisted, and (3) who was drafted during the Vietnam era. The nature of these questions requires that the conceptual framework be developed in the context of the historical setting. Certainly, draft policies and controversy over the war itself affected the lives of the young men of the period in a unique way. To demonstrate this we will look at the Vietnam era in the context of past military manpower policies. Special emphasis will be placed on the many facets of the equity question. In addition to the equity question, this study will explore factors independently associated with enlistment.

There are several hypotheses concerning the equity of the military recruitment process during the Vietnam era. First, a popular school of thought proposes that the dual policy of deferring college students while simultaneously drawing more heavily from the lower AFQT categories through Project 100,000[1] placed the burden of military service disproportionately on the lower class, the blacks, and the poorly educated.[2] Secondly, findings from another set of studies suggest that the student/occupational deferment coupled with the armed forces qualification standards placed a disproportionate burden of the military obligation on eligible blacks, the working class and the "average" in terms of education and mental ability.[3] Finally, it is possible that throughout the Vietnam era Selective Service policy changed (e.g., withdrawal of the graduate student deferment, the lottery, etc.) enough to meet national equity objectives. This would suggest that while draft policy may have selected unevenly from the poor in any one year, no one group bore a disproportionate burden over the entire period (1964-1973).

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[1] Until the inception of Project 100,000 (1966) young men were not eligible to serve in the armed forces if (1) they scored below the tenth percentile on the Armed Forces Qualifications Test (AFQT) or (2) they scored between the tenth and thirtieth percentiles and

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failed the minimum requirements on the Army Classification Battery or the Army Qualification Battery (Karpinos 1966, pp. 92-111). Project 100,000 was begun as a part of the Defense Department's effort in the War on Poverty. The minimum mental test score requirements were lowered in order to give low scoring men the chance to learn skills in the military. Under the new minimum standard, a youth could score as low as the tenth percentile on the AFQT if he was a high school graduate or received a minimum score on one of seven aptitude tests (Wool and Flyer 1969). It is important to note that while the minimum mental requirements were lowered they were not abolished. These "New Standards" men comprised 9 percent of the new entrants to the armed forces between 1966 and 1968.

[2] For example see Helmer (1974), Little (1969), and Moskos (1969).

[3] For example see Davis and Dolbeare (1968), U.S. National Advisory Commission on Selective Service (1967), and Wool (1968).

The Institutional Setting

The Selective Service played an integral role in the selection of manpower for the Armed Forces. The Selective Service saw itself as an "emergency"[4] agency which in the national interest implements the decision rules used to distinguish the eligible from the ineligible and the deferred from the non-deferred. The Selective Service policies had to balance the concept of "universality" with the "theory of selection."[5] "Universality" implied equal distribution of the military obligation among all men. "Selection," on the other hand, declared that the first men called "would be the ones who, in the national interest, could be most easily spared from the civilian economy."[6] In addition, the military required that its members have a minimum level of health and mental capacity.[7] The multiple objectives of the Selective Service led to a complex classification system--a net-like system which began classifying every man in the United States at age 18.

It was this classification system and the structural rigidity of the Selective Service which critics of the Selective Service claimed led to the inequities of the Vietnam era. In the years just prior to Vietnam (1960-63) the Selective Service System and the armed forces began to deal with a new challenge, a manpower surplus. This abundance of manpower presented a new problem in the management of the military manpower pool. The companion policies of increasing both the minimum acceptable standards[8] and the number of deferment paths reduced the manpower pool to manageable levels. By raising the minimum acceptable standards the armed forces were able to increase the "quality" of their recruits. This was an effective method. The rejection rate of men examined for the draft rose from 38 percent (prior to 1958) to a high in 1964 of 57.9 percent.[9] At the same time the Selective Service began increasing deferment avenues. The dependency, student, and occupational deferments were the channels most often used by the physically and mentally eligible young men. Deferments were quite easy to obtain, as General Hershey, the head of the Selective Service, explained to a Harvard audience: "We deferred practically everyone. If they had a reason we preferred it. But if they didn't, we made them hunt one."[10]

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[4] The Selective Service System: Its Concept, History and Operation (1967).

[5] Ibid., p. 9.

[6] Ibid.

[7] Ibid.

Implementation of the deferment policies were carried out by the 4,000 local draft boards. The Selective Service maintained that the local board was "composed of friends and neighbors of the registrant it classified."[11] In this way a man's "friends and neighbors decided whether he would be more useful to his country in a civilian capacity."[12]

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[8] Gerhardt (1971, p. 221).

[9] Walton (1967, p. 89).

[10] Gerhardt (1971, p. 265).

If the international arena had remained relatively calm, perhaps, questions concerning the equity of the system would not have been raised. However, the escalating Vietnam War, and the dramatic increase in draft calls of the mid 1960's brought the policies of the Selective Service to the public's attention. In newspapers, books and articles the concept of selective service as well as the institution and its policies were challenged.[13] Two important examples of public scrutiny are the 1966 Chicago conference on the Draft and establishment of a National Advisory Commission on the Selective Service 1966 (hereinafter referred to as the Marshall Commission).[14] Both the Chicago conference and the Marshall Commission questioned the equity of the then current system. It was argued that higher income men could effectively avoid service through the student deferment. The Marshall Commission contended that young men who had sufficient income to take advantage of the college deferment then had the additional opportunity to extend their deferred status indefinitely through graduate school, occupational or dependency deferments.

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[11] Davis and Dolbeare (1968, p. v).

[12] Ibid.

[13] The New York Times (January 3, 1966), Newsweek (April 11, 1966), Reporter (June 16, 1966), Newsweek (July 10, 1967), Carper (1967), Klassen (1966), Chapman (1967), Walton (1967), Tax (1967), The U.S. National Advisory Commission (1967).

[14] Tax (1967), The U.S. National Advisory Commission on the Selective Service (1967).

These findings, growing public pressure and the increasing manpower demands of the intensifying war led to the elimination of the graduate student deferment and a reduced list of deferred occupations. These changes were a stop-gap measure. By 1969 the lottery was initiated and by 1973 virtually all armed forces new entrants were volunteers.

On the other hand, the high incidence of unemployment among disqualified youth pointed to yet another inequity.[15] The very group which lacked sufficient skills to "make it" in the civilian sector were denied the opportunity to take advantage of military training and post-service benefits. Hence, in the same year that the graduate student deferment was abolished Project 100,000 was begun. Through Project 100,000 certain men who were formerly classified as unfit[16] were absorbed into the armed forces.

Even though no new student deferments were issued from 1970 onward, young men who were classified as 2-S (the student deferment) retained that classification until they graduated or withdrew from school. Hence the student deferment was at least partially effective throughout the entire Vietnam era.

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[15] Gerhardt (1971, p. 265).

[16] See footnote 1.

Helmer in his analysis of the Vietnam era argued that the introduction of Project 100,000 and the student deferment aggravated the inequities of the recruitment process. The result, according to Helmer, was that if a young man came from a lower or middle socioeconomic background, or had finished 12 or fewer years of school he had little chance of avoiding the armed forces during the Vietnam conflict.

During the Vietnam era, as a young man left the educational system he was confronted with another powerful institutional system which had a potential claim on the next few years of his life. Hence, any system which explores the determinants of service in the Armed Forces must include relational[17] properties which relate the individual to the institutional environmental setting.

Health and Mental Ability

The armed forces established minimum health and mental ability requirements. Individuals who did not meet these standards were not eligible to serve. Exact definitions of minimum health and mental ability were institutionally determined and, hence, subject to change through institutional directive. Since a young man's objective health condition is also subject to change, the relevant health condition is that which prevails at the time he becomes liable to the draft[18] (e.g., finished school). A negative relationship between poor health and the likelihood of service[19] is anticipated.

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[17] Barton (1968).

Most previous studies have dealt with the health factor by excluding from analysis those ineligibles for service. These studies were most frequently concerned with enlistment, and hence were not interested either in the behavior of the ineligible group or in questions of equity. However, there is reason to suspect a negative relationship between self reported poor health condition and service among those who are classified as qualified.

In 1962 the 1-Y (qualified only in times of war or national emergency) draft classification status was initiated.[20] It was originally designed to separate the "not quite fit" from the "not qualified" or 4-F classification. The 1-Y was a temporary deferment which had to be renewed every year. Men classified as 1-Y make up a heterogeneous group. For example, a man could be classified as 1-Y for such varied reasons as a broken leg at the time of the armed forces physical examination or failure to meet current minimum mental or physical standards.[21]

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[18] The time of draft eligibility will be used as the point of reference for the following variables in addition to health: region of residence; dependent status; average hourly earnings; unemployment experience; education; and draft pressure.

[19] The hypothesized relationship is anticipated for the likelihood of enlisting and being drafted. Unless otherwise stated, the hypothesized relationship between the likelihood of service and the variable under consideration also holds for the likelihood of enlisting or being drafted.

[20] Gerhardt (1971, p. 266).

Throughout the Vietnam era several programs were initiated which drew men who did not meet minimum standards out of the 1-Y pool and into active duty.[22] Hence, a 1-Y did not automatically exclude service. It did, on the other hand, act like the student deferment by delaying the potential obligation. Hence, even when the ineligible are excluded from analysis a negative relationship between service and poor health is expected.

The only previous study that included health as a variable in a multivariate analysis found some interesting racial differences. Kohen and Shields examined the impact of health limitations on the likelihood of service. While the variable did not achieve statistical significance for blacks, it was a powerful predictor among whites. The authors speculated that the relative attractiveness of the armed forces compared to the civilian labor market for black youth caused those with minor or subtle health limitations (e.g., allergies) to waive their right to non-service more often than whites with similar afflictions.[23]

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[21] Gerhardt (1971, p. 266).

[22] For example Special Training Enlistment Program (STEP) and Project 100,000.

It is a popularly held belief that the upper class avoided the draft by manipulating the health deferment, either by knowing a sympathetic doctor or by fabricating or distorting an existing physical disorder.[24] Indeed, it is noted in an official Selective Service document that "it is unfortunately true that the college years contributed somehow to an increasing rate of failure on the Armed Forces (physical) examinations".[25] Lower class youth may also avoid service for different reasons, such as physical problems due to early poor nutrition or environmental influences. On the other hand, programs such as Project 100,000 drew most heavily from the disadvantaged, thus counteracting the factors which would prevent service.

The impact of mental ability on the likelihood of serving in the armed forces stems from two different Selective Service categories of exemption or deferment--the mental ability exemption and (indirectly) through the student deferment. The mental ability exemption leads us to expect a lower incidence of service among young men with low aptitude levels. However, Project 100,000, by lowering the minimum acceptable standards during the Vietnam era, may have weakened or negated this impact.[26] From an equity standpoint, the ability exemption would have tended to reduce the rate of entrance among the lower classes.

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[23] Kohen and Shields (1977, p. 166).

[24] McGrory (1977).

[25] Semi-Annual Report of the Director of the Selective Service, (July 1, 1970 - December 31, 1970, p. 7).

The relationship between ability and entrance into the armed forces has been explored in a number of previous studies. As with health, youth with permanent ability exemptions have generally been excluded from the analysis. When the ineligible are excluded, youth with low levels of mental ability are expected to be more likely to enter military service, since they are probably not college bound and therefore, not protected by the student deferment. In addition, they are more likely to enlist in order to receive valuable training and experience. For similar reasons, youth with average levels of mental ability are also expected to have an above-average likelihood of service. Because young men with high levels of mental ability were able temporarily to avoid service through student deferments, they are expected to have a below-average likelihood of military service.

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[26] Moskos (1969).

Johnston and Bachman found an inverse relationship between mental ability and attempted enlistment. However, when looking at actual enlistments, those in the lower tail of the mental ability distribution enlisted at the same rate as those in the middle (approximately 14 percent).[27] On the other hand, only three percent of the men in the top mental ability category enlisted. College was seen as the first choice for this group. Among non-college youth, however, above-average ability was found to be positively associated with enlistment.[28] Kohen and Shields discovered that youth with average measured mental ability served at higher rates than either those with low or high IQ's.[29]

Branches of the armed forces such as the Air Force and the Navy established a higher set of mental ability requirements than the Army[30] and also received lower quotas for "New Standards" men from the Department of Defense.[31] For the most part these branches relies on enlistment. Hence, we expect that in the aggregate draftees are more likely than enlistees to be concentrated in the lower levels of the IQ distribution.

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[27] Johnston and Bachman (1972, p. 86).

[28] Ibid.

[29] Kohen and Shields (1977, p. 166).

[30] Office, Secretary of Defense, Assistant Secretary of Defense, Project One-Hundred-Thousand Characteristics and Performance of "New Standards" Men. (March 19, 1969, p. 11). Department of the Army, Supplement to Health of the Army. (June 1969, p. 74).

[31] "New Standards" men refer to the men brought in under Project 100,000.

The Hardship Deferment

Young men who could meet specific criteria established by Selective Service regulation were deferred (i.e., not liable to the draft while so classified). While these criteria for deferment were revised throughout the Vietnam era[32] hardship deferment remained relatively stable. The hardship deferment, based mainly on the presence of a child, constituted a permanent deferment contingent primarily upon a minimum level of national security. Over thirty percent of the young men deferred held hardship deferments, making it the single largest deferred category.[33] Given the risks of war and the opportunities in the civilian sector relative to those in the military it is assumed that most young fathers will choose not to join. Because there is an inverse relationship between socioeconomic status and a young man's age at the birth of his first child[34] this deferment tends to provide the greatest degree of protection to the lower socioeconomic classes.

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[32] Annual Report of the Director of Selective Service (1963-1967), Semiannual Report of the Director of Selective Service, (January 1970-December 1975).

[33] Annual Report of the Director of Selective Service (1967, p. 24). Semiannual Report of the Director of Selective Service (July 1970, p. 7).

Draft Pressure

During the Vietnam era the need for recruits fluctuated, along with the intensity of the fighting. Armed forces manpower demand was reflected in the level of draft calls. Not surprisingly, Kohen and Shields found that a prospective recruit was more likely to enter the military if he became eligible during times of high draft calls. Not only does the number of draftees increase during such periods, but enlistments may also be expected to increase when draft calls are high. Entering as a volunteer was a way to fulfill an obligation and simultaneously to avoid some of the costs of the draft (i.e., a relatively higher probability of exposure to combat). In addition, enlistment offered a relatively greater degree of choice of branch of service, military occupational specialty and training opportunities. It is little wonder that many enlistments occurred between the time that a yough received notification that he was drafted and his scheduled induction date. In all previous studies, measures of draft pressure have been significantly related to levels of enlistment or service.[35] Hence, it is hypothesized that if a young man becomes draft eligible during periods of high draft calls he will be more likely to enter the military.

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[34] U.S. Bureau of the Census, Current Population Reports, (1974, Table 5, p. 27).

Education

Beyond Selective Service criteria, there are various personal characteristics that may reasonably be expected to be associated with the dependent variable in all three models. Since the student deferment[36] was central to the controversy over the draft, it is necessary to examine the relationship between pre-service education and service in the armed forces. The impact of the student deferment, some suggest, was to channel the highly educated away from service. However, the student deferment is only one facet of the potential theoretical impact of education on the likelihood of military service. For example, young men who have no intention of pursuing higher education may view time spent in the armed forces as a substitute for civilian experience and training, and hence enlist.

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[35] Johnston and Bachman examined draft pressure in the context of several motives which they postulated are directly related to enlistment. Motives in their analysis included: (1) a young man's perceived "self fit" with military type job; (2) a youth's indecision over future plans; and (3) his draft status. They hypothesized that if a young man perceived a good fit between himself and a military job, was undecided about his vocation plans, or faced a high probability of being drafted he was more likely to enlist. All three variables were found to be positively associated with enlistment and these variables alone accounted for 32 percent of the variance in enlistment behavior. The most important predictor was knowing whether a young man planned to enlist after high school. Unfortunately, knowing that short-run plans preceded action suggests little about how these plans were formed. They found that the more useful concepts of "fit" and "draft status" accounted for 19.2 percent of the variance, with draft status being the most powerful predictor. Johnston and Bachman (1972, p. 67).

Another set of enlistment studies hypothesized that the draft affected the enlistment decision primarily through its impact on expected civilian returns. An individual's estimate of the probability of being drafted affects his estimate of the present value ot civilian earnings. In other words, as the probability of being drafted rises, expected civilian returns fall, reducing the difference between expected returns in the two sectors and hence motivating enlistment (Fisher 1969).

Although it is at times unclear, a careful review of the literature suggests that youth who are "average" in terms of educational attainment are most likely to serve.[37] Kohen and Shields discovered a strong association between pre-service education and the likelihood of service. For both racial groups high school graduates were significantly more likely to enter the armed forces. However, a racial difference appeared for high school dropouts, i.e., the likelihood of serving is significantly below average for blacks but no different than average for whites. While blacks with some college did not serve at significantly lower rates their white counterparts did.

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[36] The precise criteria for a student deferment changed throughout the Vietnam era. Until 1966, enrollment in a graduate or undergraduate program ensured deferment. For a short time (1966) the 2-S was based on class standing. Graduate student deferments (except for students in medical or related fields) were abolished in 1967, while undergraduates making "normal progress" toward a degree continued to be protected. In 1969 the lottery was established and student deferments were no longer extended to incoming students. However, existing deferments were continued until graduation or withdrawal from school.

[37] Gray (1970), Kohen and Shields (1977), Wool (1968).

In his discussion of pre-Vietnam era studies Wool came to a similar conclusion--participation in the armed forces was lowest at both extremes of the educational attainment spectrum.[38] A Defense Department sample survey of male civilians (ages 26-34) revealed that 73 percent of the high school completers with no college experience had entered the armed forces, while only 51 percent and 59 percent, respectively, of the college graduates and high school dropouts served.[39]

Contrary to the above cited studies but consistent with many popular perceptions, Fligstein found that pre-service education during the Vietnam era was inversely related to the likelihood of service. He concluded that each additional year of education reduced the likelihood of service by 2.1 percent.[40]

Race and Family Background

Equality in the presence of the draft implies equal exposure to military service among the draft eligible. Although the concept of equity has many facets, race and social class are frequently mentioned as dimensions along which the conscription system failed to meet the equity objective.

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[38] Wool (1968, p. 103).

[39] Wool (1968, p. 106).

[40] Fligstein (1976, p. 17).

Race

Much of the concern with the inequities in the Selective Service system revolved around the race issue. A finding of overriding concern during the early war years was the consistently higher proportion of blacks, compared to whites, that failed to meet the armed forces entrance requirements.[41] This failure was primarily due to poor performance on the mental test. Throughout a 16-year period (1950-1966) blacks were disqualified on mental grounds at four times the rate for whites.[42] It was argued that through high disqualification rates blacks were denied the opportunity to participate in the benefits of service; i.e., training, medical care, etc. In an effort to overcome these problems as well as meet the growing military manpower demand the years after 1966 were marked by national programs designed to increase the proportion of blacks disqualified. Therefore, it is not surprising that the literature which includes post-1966 data suggests an equal likelihood of service between blacks and whites.

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[41] Gerhardt (1971), Karpinos (1966), Moskos (1969), National Advisory Commission on Selective Service (1967).

[42] Moskos (1969).

Because of the small number of blacks in their sample, Johnston and Bachman examined racial differences through a simple table showing the probability of enlisting by race. They discovered equity between the races, approximately 14.5 percent enlisted after leaving high school.[43] Overall, Kohen and Shields found that a larger proportion of whites than blacks served in the military (26 versus 24 percent).[44] However, consistent with the findings of Johnston and Bachman, even this small difference disappeared when other factors were controlled. The Kohen and Shields study is the only work in the literature which did separate multivariate analysis by race. Although there were no overall racial differences, Kohen and Shields discovered racial differences in the effects of some of the factors explaining participation in the armed forces. These differences appeared as the impact of health, region of residence and education and will be discussed under the corresponding subheadings.

Fligstein found a significant difference between the racial groups. He found that blacks served in disproportionately fewer numbers than whites; he reports that they were 17.7 percent less likely than whites to serve;[45] and attirbuted this to either disproportionately high physical/mental rejection rates for blacks or racial discrimination practiced by the military. However, it is questionable whether, as he claims, his results are generalizable over the Vietnam era. Fligstein's results are not surprising given the limitations of his sample, which included only respondents who were 18 and over in 1966. As was noted earlier, the years prior to 1966 were marked by high disqualification rates among blacks. The years after 1966, on the other hand, saw increased military manpower demand and programs such as Project 100,000, both of which tended to increase black participation. Approximately 40 percent of the men who entered under Project 100,000 were black.[46]

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[43] Johnston and Bachman (1972, p. 104).

[44] Kohen and Shields (1977, p. 166).

[45] Fligstein (1977, p. 15).

Aside from the high disqualification rates among blacks another aspect of the race/equity picture came to the public's attention. Even though blacks experienced disproportionate disqualification rates they were drafted at rates greater than those of whites. Furthermore, the burden of the draft seemed to weigh most heavily upon the qualified blacks. The Marshall Commission found that in 1964, of the qualified 26-34 year olds, 30.2 percent of the blacks were drafted compared to 18.8 percent of their white counterparts.[47]

The quota system and the racial composition of local draft boards have often been cited among the reasons for this discrepancy. In 1966, blacks made up only 1.5 percent of all draft board members in the entire country.[48] Indeed, many states in the deep South had never had a single black appointed to a local draft board. The Selective Service quota system probably led to higher conscription rates among eligible blacks. Draft quotas were based upon the 1-A (available for service) pool and consequently excluded men in deferred categories.[49] Blacks were less likely than whites to take advantage of the student or occupational deferment.[50] Hence a disproportionate number of qualified blacks were members of the draft eligible pool in their community. Subsequent policy changes such as the elimination of the student deferment probably reduced the disproportionate rates of conscription among eligible blacks. Hence, given these countervailing policies, it is unclear whether blacks as a whole were inducted at disproportionate rates. However, we expect that these policies did not offset the trend among qualified blacks. We hypothesize that eligible blacks were inducted at higher rates than their white counterparts.

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[46] Moskos (1969, p. 155).

[47] The National Advisory Commission on Selective Service (1967, p. 22).

Socioeconomic Status

Throughout the literature of the mid and late 1960's there were frequent references to discrimination in draft policy along socioeconomic lines.[51] It was argued that the composition of the local draft boards, the conscription/enlistment quota system and the student deferment were the chief causes of the low rates of service among upper income youth.

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[48] Moskos (1969, p. 157).

[49] Little (1969, p. 23).

[50] Moskos (1969, p. 146).

General Hershey depicted the local draft board as representative of the community. He described the local board as "little groups of neighbors" who decided which men served in the armed forces and which served their country best as civilians.[52] A closer look at the actual draft board composition suggests a rather unrepresentative picture. Aside from the fact that nearly half of the all male, predominantly white board members were over 60 and almost two-thirds were veterans, the occupational and educational levels differed from the population as a whole. The educational attainment of board members was comparatively high and the dominant occupation groups were professional and proprietors-managers-officials.[53] Davis and Dolbeare describe the local board members as part of the "elite" in the local community.

Although most of the draft classification decisions involved minimal judgment, Davis and Dolbeare estimated that between 10 and

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[51] For example see Davis and Dolbeare (1969), Little (1969), Moskos (1969), and The National Advisory Commission on Selective Service (1967).

[52] Davis and Dolbeare (1969, p. 57).

[53] Ibid., pp. 57-58.

30 percent of the cases before the local board at any one time involved the discretion of the members. In most cases discretion was exercised in deciding borderline hardship and occupational deferments.[54] Officially, the deferred occupations were outlined in the Department of Labor Critical Skills List. However, in practice there was little correspondence between the Department of Labor Critical Skills List and local deferment policy. The "decisions were based on the board members' newspaper reading, individual assumption or private prejudices."[55] In a sample of 199 local draft boards the Marshall Commission discovered considerable variability between boards in exactly which occupations they chose to defer.[56] The unrepresentative nature of the local board, and their discretion and variability in determining occupational deferments led to the conclusion that local board members favored young men who, like themselves, were from the upper class.

Quotas for both enlistment and conscription were derived from the 1-A pool. Lower class youth had a greater likelihood of being classified as 1-A since they were less likely to attend college of be eligible for occupational deferments. Hence, they were more likely to serve.

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[54] Davis and Dolbeare (1969, p. 79).

[55] Ibid., p. 81.

[56] The National Advisory Commission on Selective Service (1967, p. 95).

During the midst of the Vietnam era differential rates of service by education level were often cited as evidence to support the existence of discrimination along socioeconomic lines. For example, Davis and Dolbeare reported that only 40 percent of all college graduates (age 26 in 1964) had experienced military service.[57] The data from which these early studies were taken did not include the impact of either deferment/exemption policy changes or the intense fighting and high draft calls of the mid 1960's (1966-1968).

Interestingly, the findings of studies which utilized later data suggest that socioeconomic status does not have a direct effect on entering the military. Rather, the impact is indirect, acting through such factors as education and mental ability. The Fligstein and Kohen and Shields studies found no net independent impact of socioeconomic status on the likelihood of serving. However neither of the studies explored the relationship between SES and service among the eligibles.[58] Johnston and Bachman found an inverse relationship between enlistment and socioeconomic status.

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[57] Davis and Dolbeare (1969, p. 15).

[58] Selective Service critics claimed that the burden of service fell upon eligible youth from the lower SES groups. High incidence of failure to meet mental requirements among the poor was cited as the reason.

Youth from higher status families chose enrollment in college over enlistment. However, their research design automatically defines college attendance and enlistment as mutually exclusive events. Many youth enlist after their first year of college; hence, this study explored only a very short-run relationship between enlistment and socioeconomic status.

We hypothesize an inverse relationship between socioeconomic status and the likelihood of service among the eligible. High incidence of disqualification among the poor, however, leads us to hypothesize an inverted U relationship between service and social class when the ineligibles are included in the analysis.

Residence

It is a commonly held view that young men from the South and/or rural environments serve in the military in disproportionately high numbers. The explanation is often in terms of "escape" and "opportunity"[59] according to this view if a young man lives in a relatively poor region such as the South or in a rural environment he is more likely to enlist in order to escape the problems of a poor local labor market. The military is a viable choice because it simultaneously offers secure employment and increases subsequent civilian opportunities through such features as training and travel. The empirical evidence on this hypothesis is mixed. Neither Gray nor Johnston and Bachman found evidence to support the hypothesis that enlistment is more frequent among youth in the South. However, Johnston and Bachman discovered that youth from small towns and cities were more likely to enlist than either rural youth or young men from large metropolitan areas.

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[59] Johnston and Bachman (1972, p. 101-102). The "escape" and "opportunity" hypothesis also applies to factors such as race and socioeconomic status.

Kohen and Shields explored the region of residence question in a different manner. They looked at AFQT disqualification rates by state[60] and discovered a pattern. Rural Southern states show higher than average rejection rates, perhaps stemming from a poorer educational system. Thus, higher-than-average dispositions to enlist may be offset by higher-than-average failure rates on the AFQT among rural Southern youth. To account for rural-urban differences, Kohen and Shields incorporated a South-urbanicity interaction variable into their model. They found this variable to exhibit interesting racial differences. The probability of military service was significantly higher than average for both whites and blacks from the urban South. However, the authors contended that the reasons for this phenomenon probably differ by race. For whites, they argued, the military sustained its traditional appeal while for blacks the military maintained its potential as an avenue of escape from discrimination in the civilian labor market. Rural Southern whites had rates of participation in the armed forces that were significantly below average, perhaps because of agricultural deferments and because lower quality schooling led to higher failure rates on the AFQT. The effect of residing in a rural area was less pronounced among Southern black yough, perhaps because higher-than-average enlistment to escape racial discrimination offset the negative impact of lower quality education.

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[60] Karpinos (1966). The AFQT is used in establishing mental ability standards. See footnote 1.

Variations in enlistment have also been found among geographic regions outside the South. Altman and Barro discovered a negative relationship between residence in the Northeast and enlistment. Kohen and Shields found the same relationship for the likelihood of entering the armed services. The latter authors postulate that the higher-than-average anti-war sentiment in the Northeast influenced enlistment behavior.[61]

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[61] The Selective Service local quota system suggests a relationship between "draft" and region. For example, to the extent that enlistments within a specific region do not fulfill necessary quotas the remainder of the quota would be fulfilled by draftees. Hence, if enlistment rates are unusually high within a region, the proportion drafted from that region would be less than the national average. On the other hand, if the proportion who served departs from the national average it is not clear how this proportion is distributed. The group may be composed of an above average number of draftees, enlistees, or both.

In summary, we hypothesize that the probability of enlisting and serving is positively associated with residence in the urban South and negatively associated with residence in the rural South. Because of the hypothesized propensity to enlist in the urban south (and thus quotas were met by enlistees) a negative relationship between conscription and residence in the rural south is hypothesized.

Another possible source of regional variation in the likelihood of entering the armed forces stems from the popular notion that during the Vietnam era local draft boards in large metropolitan areas drafted eligible urban poor, while upper class suburban youth were protected from conscription. The demographic characteristics of draft board members from northern urban cities were cited as the rationale for this hypothesis.

The draft board demographic characteristics seldom matched those of the population they served. It was a Selective Service policy that once a local draft board member was appointed that position was retained until he resigned. Consequently, it was not uncommon for men to have tenure as board members of 15 to 25 years.[62] Hence, the draft board composition retained the characteristics of an earlier period while urban whites migrated to the suburbs and blacks moved into the Northern central cities.[63]

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[62] Davis and Dolbeare (1969, p. 64).

[63] Little (1969, pp. 15-16).

In order to test this hypothesis the Northeast and North Central regions are divided into central-city and not-central-city variables.[64] We hypothesize a positive relationship between residence in the central cities and the likelihood of being drafted among blacks. In addition, a negative relationship is anticipated for the likelihood of serving and enlisting for those who reside in the Northeast.

Knowledge of the World of Work

There is evidence to suggest that a young man's understanding of the range of occupations potentially available and their rewards and entrance requirements is related to measures of his success in the labor market.[65] Such "knowledge of the world of work" is hypothesized to be inversely related to the probability of a youth's being drafted. This hypothesis is grounded in the assumption that a "knowledge of the world of work" is a proxy for an understanding of the military. An understanding of the military would include an understanding of the Selective Service system as well as the consequences of being a member of the armed forces. For example, if a young man understands the military alternative he will be able to evaluate his own probability of being drafted (e.g., Army, combat, etc.). He will also understand the potential advantages of the armed forces such as technical training, medical care and the GI bill. Given that a young man understands the military it is further assumed that he would try to avoid the draft either by enlisting or through the many deferment avenues.

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[64] The not-central-city category includes both the suburban and rural areas. The limited number of blacks living in the rural northern regions is the reason this variable is not defined as central-city, suburb, and rural.

[65] Parnes and Kohen (1975).

Labor Market Factors

There have been numerous economic analyses of the determinants of enlistment.[66] The purpose of many of these studies was to estimate a military manpower supply function that could be used to determine how much (in the absence of the draft) the armed forces pay scale would have to increase in order to achieve equiliborium between the civilian and military labor markets.

The economic theory of occupational choice has frequently been drawn upon in this context. This theory, as modified to apply to the military, may be briefly reviewed. In the absence of a draft the decision to enlist may be conceived to involve a comparison between military service and employment in the civilian sector.

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[66] For example see Altman (1969), Altman and Barro (1970), Altman and Fechter (1967), Cook (1970), Fechter (1970), Fisher (1969), Gilman (1970), Gray (1970), Hansen and Weisbrod (1967), Oi (1967), and Oi (1970).

Each of these alternatives may be viewed as comprising a combination of pecuniary and non-pecuniary costs and benefits. Occupational choice theory assumes that the individual will choose that activity which yields the highest net pecuniary and non-pecuniary benefits. Hence, if the present value of the net benefits of enlistment exceeds the present value of the net benefits associated with non-enlistment activity, a potentially eligible young man would choose to enlist.

One would expect differences in the evaluation of these costs and benefits among different individuals. Nevertheless, on the assumption that all costs and benefits could be measured and expressed in a common metric, it would be possible for each individual to establish a reservation military wage; i.e., that wage at which the sum of the net pecuniary and non-pecuniary benefits of enlistment equal the sum of the net pecuniary and non-pecuniary benefits associated with remaining in the civilian sector. Hence, in principle each potential enlistee can be placed on a continuum which reflects his reservation wage. If the actual military wage offered is greater than his reservation wage the potential enlistee will enlist.

Since the non-pecuniary benefits and costs of enlistment and non-enlistment activities are difficult to measure, all of the studies utilizing this theoretical framework have restricted their comparisons to the pecuniary aspects of civilian and military sectors.

Conceptually, the pecuniary returns to non-enlistment are represented by the present value of the expected civilian earnings stream over an individual's life; the pecuniary returns to enlistment are represented by the present value of the expected military earnings stream during the period, and of the civilian earnings stream thereafter.[67,68] Other things being equal, the youth whose relative earnings are greater in the armed forces will enlist.

However, most studies do not assess the impact of relative earnings differentials without incorporating an estimate of another key labor market reality - potential unemployment. A spell of unemployment reduces civilian earnings. In calculating the present value of returns to the civilian alternative a prospective enlistee should theoretically take into account an estimate of the probability of unemployment as well as the expected duration of such unemployment over the period. If the reduction of earnings through anticipated unemployment is high enough it will reduce expected civilian returns and motivate enlistment.

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[67] Most of the existing studies assume that a veteran's post-service earnings are equivalent to that of a non-veteran. Hence, they simplify their analysis by restricting their models to the expected military/civilian earnings stream over the enlistment period. For example see Cook (1970), Fisher (1969), and Gray (1970).

[68] Military earnings includes in-kind military income such as medical services and housing.

Most of the studies that have utilized the conceptual framework discussed above were developed during the late 1960's, and the earliest of them were published in economics journals.[69] As the furor over the draft continued, the authors of these early studies and other labor economists working in the military manpower field were commissioned to study the question. The results were published in The Studies Prepared for the President's Commission on the All-Volunteer Armed Force (1970). The objective of this document (hereafter called the Gates Commission studies) was to make policy recommendations concerning the possibility of an all volunteer armed force. Aggregate quarterly time series and aggregate cross sectional regional data were utilized to test these hypotheses.

Both the early enlistment studies and the Gates Commission studies found a significant relationship between rates of enlistment and civilian-military earnings differentials. Gilman summarized the results of the several Gates Commission studies and concluded that the elasticity of supply for initial entrants was 1.25; i.e., a one percent increase in the ratio of military to civilian earnings would result in a 1.25 percent increase in enlistments. The results of Fechter's absolute pay model suggest that the power of the relative earnings variable stems from the civilian earnings component. He found a significant negative relationship between civilian pay and enlistment, but no significant relationship between military pay and the criterion measure. However, the results of other studies have suggested that the apparent impact of relative pay differentials would be weakened if other variables such as draft pressure or the unemployment rate were added to the model. In addition, there were certain situations in which the earnings differential failed to achieve significance. For example, Gray could find no condition under which relative pay differentials explained enlistment in the Marine Corps.

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[69] For example see Altman (1969), Altman and Fechter (1967), Fisher (1969); Hansen and Weisbrod (1967), and Oi (1967).

Aside from the few instances in which studies using aggregate data failed to find any relationship, there is mixed empirical evidence on the relationship between the earnings differentials and the enlistment decision. Utilizing panel data Johnston and Bachman found no cross-sectional relationship between the likelihood of enlistment and the typical wage of an unskilled worker in the local labor market. In addition, the results of a series of enlistment attitude surveys tend to support the Johnston and Bachman findings. In 1960 a Project TALENT survey found that in response to the question "Under which one of the following conditions would you be most likely to consider the military service for a lifetime career?", the response "if the salary was better" ranked at the bottom of the list. The opportunity to become a commissioned officer or to receive training were the most frequently cited responses.[70] A 1964 Defense Department survey found that the primary motivation for enlistment other than the draft was the training and educational opportunities available through military service.[71]

Studies exploring potential enlistment incentives have reported similar results. Both Korman et al. and Frey et al. concluded that "control over one's fate" or self-determination was the most important factor associated with a positive attitude toward enlistment. In two national surveys of men 16 through 22 years of age, Frey et al. compared the potential influence on enlistment attitudes of a number of incentives, individually and in combination. They found no support for the attitude that "more is better"; e.g., items which proxied for "control over one's fate" consistently ranked higher than larger bonuses or more pay.[72]

In summary, we hypothesize an inverse relationship between the likelihood of serving/enlisting and civilian wages. Theoretically, there is no reason to expect a relationship between the draft and earnings. Hence, an earnings measure does not enter the draft model.

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[70] Wool (1968, p. 111).

[71] Ibid.

[72] Frey et al. (1973, pp. 33-35).

The evidence on a relationship between unemployment and enlistment is unclear. Altman and Fechter's early time series study, which did not include a relative earnings variable in the model, found a significant relationship between unemployment of 18 and 19 year old men and Army enlistments. However, other time series studies, including those of the Gates Commission, found no significant relationship between the youth unemployment rate and enlistment when relative earnings were controlled. On the other hand, an analysis utilizing aggregate regional data found both relative earnings and the unemployment rate to be significantly related to enlistment, although, the strength of the unemployment rate as a predictor weakened when a draft pressure variable was added.[73] Hause found an association between enlistment and duration of unemployment in a model that controlled for civilian earnings.[74] Inexplicably, he asserted that the absence of a draft pressure variable did not affect his results. In their panel study, Johnston and Bachman found a weak relationship between enlistment and the unemployment rate in the local labor markets - unemployment rates of six percent and above were positively related to enlistment. As in the time series studies, the relationship disappeared when earnings were controlled. A direct relationship between duration of unemployment and the likelihood of serving or enlisting. As with the earnings measure an unemployment variable does not enter the draft model.

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[73] Altman (1969).

[74] Hause (1973).

Summary of Hypotheses

This chapter has proposed that the determinants of military service can be classified into four sets of explanatory factors: institutional, family background, environmental and labor market. Table 1 summarizes the hypotheses that have been presented. These hypotheses are based upon the assumption that all men in the relevant age are included in the model; some of them would be expected to change if the universe under consideration consists of only those eligible to serve. Table 2 summarizes the hypotheses that are expected to change under the "eligible-to-serve" universe. In order to examine racial differences the analysis will be run separately by race.

Table 1 Summary of Hypotheses: Universe Includes All Men in Relevant Age Range

Independent measures	Dependent measures					
	Probability of serving		Probability of enlisting		Probability of being drafted	
	White	Black	White	Black	White	Black
Health condition						
Poor health	-	-	-	-	-	-
Healthy	+	+	+	+	+	+
Mental ability						
Above average	-	-	-	-	-	-
Average	+	+	+	+	+	+
Below average	-	-	-	-	-	-
Dependents						
Children present	-	-	-	-	-	-
No children	+	+	+	+	+	+
Education						
0-8	-	-	-	-	-	-
9-11	+	+	+	+	+	+
12	+	+	+	+	+	+
13-15	+	+	+	+	+	+
16	-	-	-	-	-	-
17+	-	-	-	-	-	-
Draft pressure						
High	+	+	+	+	+	+
Low	-	-	-	-	-	-
Socioeconomic status						
High	-	-	-	-	-	-
Medium	+	+	+	+	+	+
Low	-	-	-	-	-	-
Residence						
NE Central City	-	-	-	-	*	+
NE Other	-	-	-	-	*	*
N Central Central City	*	*	*	*	*	+
N Central Other	*	*	*	*	*	*
South Urban	+	+	+	+	+	+
South Rural	-	-	-	-	-	-
West	*	*	*	*	*	*
Civilian earnings						
Low	+	+	+	+	X	X
Medium	*	*	*	*	X	X
High	-	-	-	-	X	X
Unemployment						
Never worked	+	+	+	+	X	X
No unemployment	-	-	-	-	X	X
1-10 weeks	*	*	*	*	X	X
10+ weeks	-	-	-	-	X	X
Knowledge of the world of work						
Above average	X	X	X	X	-	-
Average	X	X	X	X	*	*
Below average	X	X	X	X	+	+

Key: (+) signifies a positive relationship between independent and dependent variable.
(-) signifies a negative relationship between independent and dependent variable.
* signifies no hypothesized relationship between independent and dependent variable.
X variable does not enter the model.

Table 2 Summary of Hypotheses: Universe Includes Only Eligible Men in the Relevant Age Range[a]

Independent measures	Dependent measures					
	Probability of serving		Probability of enlisting		Probability of being drafted	
	White	Black	White	Black	White	Black
Health condition						
Poor health	-	-	-	-	*	*
Healthy	+	+	+	+	*	*
Mental ability						
Above average	-	-	-	-	-	-
Average	+	+	+	+	+	+
Below average	+	+	+	+	+	+
Socioeconomic status						
High	-	-	-	-	-	-
Medium	+	+	+	+	+	+
Low	+	+	+	+	+	+

Key: (+) signifies a positive relationship between independent and dependent variables.
(-) signifies a negative relationship between independent and dependent variables.
* signifies no hypothesized relationship between the independent and depedent variable.

[a] All other hypotheses are similar to those expressed in Table 1.

CHAPTER THREE

METHODOLOGICAL ISSUES

Introduction

This chapter deals with the methodological aspects of this research effort, especially the operationalization of the concepts embodied in the research objectives and the hypotheses. Special attention is paid to describing the respects in which the methodological limitations of previous studies have been overcome. These improvements are of two general types. First, the longitudinal nature of the sample allows generalizability across both time and individuals. Second, the construction of the variables assures that the relationships being explored are in the correct temporal sequence (e.g., key variables measure individual characteristics at the time a young man was legally draft eligible).

The first section of this chapter describes the data base. Section two deals with the operationalization of the dependent measures. In the third section the measurement of the independent variables is discussed. Finally, the statistical technique used to test hypotheses is examined.

The Data

The data used in this study are based upon information collected in the National Longitudinal Surveys (NLS) of the labor market and educational experiences of young men.[1] The sample is a multistage probability sample containing over 5,000 respondents selected from the civilian noninstitutionalized population of young men aged 14 to 24 who were first interviewed in the fall of 1966 and annually thereafter through 1971. Abbreviated telephone interviews were conducted in 1973 and 1975, with another personal interview in 1976. All but one of the variables used in this analyses come from the 1966-1973 interviews, which were conducted by the Bureau of the Census.[2,3] Since there were no additions to the NLS sample, it does not accurately represent the civilian population in any year after 1966.

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[1] The National Longitudinal Surveys are sponsored by the Employment and Training Administration of the U.S. Department of Labor under the authority of the Manpower Development and Training Act of 1962.

The cohort of male youth is one of four age-sex cohorts included in the NLS. For an overview of the NLS and a bibliography of completed research see Center for Human Resource Research (1976). For a detailed description of the young men's cohort see Volumes I-VI of the Career Thresholds series: Parnes, et al. (1970), Zeller, et al. (1971), Kohen and Parnes (1971), Kohen and Andrisani (1973), Andrisani and Kohen (1975), and Kohen, et al. (1977).

[2] The U.S. Bureau of the Census, under a separate contract with the Employment and Training Administration was responsible for designing and drawing the sample as well as conducting all of the field work. The Center for Human Resource Research, The Ohio State University, has been responsible for the design of the survey instruments and analysis of the data.

[3] Unlike all other variables used in this analysis the mental ability measure was constructed using data obtained from a 1968 survey of the young men's high schools.

Attrition from the NLS for reasons other than the armed forces has been relatively low (12 percent of the whites and 20 percent of the blacks were not interviewed in 1971).[4] More importantly, attrition rates by individual characteristics relevant to the current study, such as SES and student status are comparable to the overall attrition rate. For example, 16 percent of the black and white students in 1966 who were classified as lower SES were not interviewed in 1971 for reasons other than armed forces.

One of the objectives of the NLS sample design was to obtain enough sample cases to make possible separate reliable statistics for black youth. This was accomplished by oversampling blacks so that they represent 30 percent of the sample, even though they represent only about 12 percent of the population. For this reason, and because unweighted sample cases are used in this analysis,[5] results are presented separately by race.

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[4] As of 1971 nine percent of the whites and eleven percent of the blacks were not interviewed because they were members of the armed forces. These young men were interviewed when they reenter the civilian sector. For further information on sample characteristics see Kohen et al. (1977, p. 199).

[5] Smith (1976) discusses the implications for regression analyses of unequal weighting of observations according to probability of selection to the sample. He demonstrates that the sample weights drop out of both the ordinary least squares and maximum-likelihood formulas. Hence unequal weighting of observations has little impact on regression estimates when classical assumptions hold and the model is correctly specified.

The universe for this study is a subset of the total NLS sample of young men. It includes white and black respondents who were (1) 14 to 20 years of age in 1966 and (2) not veterans when they entered the sample. This universe was chosen in order to obtain preservice characteristics directly rather than relying on retrospective information. The restricted sample is large enough to make analysis possible; furthermore, the 14 to 20 age cohort is representative of the majority of respondents who entered the service after 1966. There were 1,139 respondents who entered the military after the initial survey (1966); of these, 1,051 (92 percent) were in the 14 to 20 age group (Table 3). The data permit generalization with respect to the entire Vietnam era, since the annual interviews[6] covered a period (1966-1973) that corresponded closely to the Vietnam era (1964-1973).

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[6] There was no interview conducted in 1972.

Table 3 Sample Characteristics: Veteran Status and Year Discharged, by Age in 1966

Veteran Status	Number of Respondents	Age in 1966	
		14 to 20	21 to 24
Total	5162[a]	3812	1350
Nonveteran 1973	3661	2729	932
Veteran Discharged by 1966	362	32	330
Veteran Discharged after 1966	1139	1051	88
Discharged by 1967	6	3	3
Discharged by 1968	31	21	10
Discharged by 1969	144	123	21
Discharged by 1970	225	203	22
Discharged by 1971	230	219	11
Discharged by 1973	247	238	9
In the Service as of 1973	256	244	12

[a] White and black respondents only.

Aside from the universe discussed above, a second universe is specified restricting the above sample to respondents who were not permanently exempted[7] from the armed forces. The permanently exempted youth were eliminated from the universe to ensure comparability with past enlistment studies.[8] Moreover, exclusion of this group from analysis permits exploration of another facet of the issue, namely whether the armed forces drew more heavily from any one group after the ineligible are excluded. For example, while the armed forces may not have drafted blacks disproportionately, they may have drafted "eligible" blacks in greater than average numbers.

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[7] If a young man was classified "4-F"; i.e., "Registrant not qualified for any military service," he was omitted from the sample. (National Advisory Commission on Selective Service, 1967).

Finally, it should be emphasized that the initial NLS survey does not contain youth in this age cohort who were in the armed forces in 1966. This omission tends to bias the results by understating the true proportion who entered the armed forces. However, the upper age limit of 20 as of the initial interview in 1966 minimizes the importance of the problem since a large majority of these youth--those under 18--were not eligible for the draft in 1966. Nevertheless, the most serious underrepresentation of the population lies with the 19 and 20 year olds.

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[8] Actually, many enlistment studies restricted their analysis to the top three mental groups as defined by the Armed Forces Qualification Test (AFQT); e.g., Altman (1969), Altman and Fechter (1967), Cook (1970), Fechter (1970), Fisher (1969), Gray (1970).

The Dependent Variables

The Likelihood of Serving

Past studies that explored the "who serves" question employed cross-sectional or panel data. Fligstein utilized data from the 1973 "Occupational Changes in a Generation" (OCG) survey.[9] His sample consisted of 25,064 males who were (1) between the ages of 25 and 65 (in 1973), (2) not enrolled in school, and (3) members of the experienced civilian labor force.[10] The dependent variable was dichotomous, taking on the value "1" if an individual served and "0" otherwise. Obviously, this sample represents men who served in the armed forces during periods far removed from the Vietnam era. In order to account for the different historical settings, Fligstein divided his sample into four "birth cohorts" representing the World War II, Korea, "Other" (1955-1965) and Vietnam periods. In the analyses, dummy variables[11] were constructed to represent three of the four time periods. The dependent variable was regressed on the explanatory variables and each of the first-order interactions of the "period" dummies with the other explanatory variables. This method allowed him to show how "nonperiod" factors affected the likelihood of service in each period.

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[9] See Featherman and Hauser (1975) for a more detailed description of the study.

[10] Fligstein (1976, p.6).

[11] Men 25 to 33 years of age in 1973 were coded "1" on the Vietnam dummy.

The chief weakness of Fligstein's study, as it applies to the Vietnam era, stems from his original sample. The OCG data (1) do not account for men who were completing their duty as of 1973; (2) cover an age group which underrepresents a significant portion of the Vietnam era veterans; and (3) exclude youth who died or were permanently injured (through the war or other causes). The nonrepresentation of the younger Vietnam era veterans is the most serious problem with this study. The youngest man in the sample was 18 in 1966. The years following 1966 were characterized by heavy fighting and high draft calls.[12] The omission of young men who were eligible to serve after 1966 seriously limits the generalizability of his findings to the Vietnam era as a whole.

The NLS cohort of male youth was used in the Kohen and Shields study. Whereas this study limits the NLS sample to 14 to 20 year old nonveterans, Kohen and Shields took advantage of the entire NLS sample (14 to 24 year olds in 1966) excluding only those men who were discharged from the armed forces prior to 1964 (the beginning of the Vietnam era).

The dependent variable utilized by Kohen and Shields and in the present study was dichotomous and distinguished between those who served six months or more and those who did not,[13] irrespective of whether they were discharged and returned to the sample by the appropriate survey date. The Kohen and Shields study looked at the likelihood of serving as of 1971 while this study utilizes 1973 information.[14]

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[12] The years of highest draft calls and military manpower demand were 1966-1968. Kohen and Shields (1977, p. 159).

[13] A respondent must serve six months or more to receive a "1" on the dependent variable.

The Likelihood of Enlisting

Unlike the "who serves" question, most enlistment studies utilize quarterly time series or aggregate cross-sectional regional data.[15] The dependent variable for most of these studies was a variant of the enlistment rate [(number of youth who enlisted)/(eligible population)].[16] Altman and Cook stratified their sample by mental ability group in order to determine the responses of different "quality" groups to earnings differentials, the unemployment rate, and draft pressure changes.[17] Several studies explored separate rates of enlistment into the various branches of service, although most focused on the Army.[18] This was a special policy concern because the Army was, for the most part, the only branch of the armed forces which relied directly upon the draft for manpower.

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[14] In both studies it is possible to identify military/civilian status for respondents not interviewed in a given survey year, with the minor exceptions of those who are not eligible for interview by either (1) having been dropped from the sample for two consecutive (nonmilitary) noninterviews or (2) a previous refusal to participate in the NLS. In these cases it is assumed that the respondent did not enter the armed forces.

[15] These studies were based on data from the pre- or early/middle Vietnam experience. This period of relative peace may have had an advantage from a policy perspective. In general, military manpower recruitment takes place in peacetime, during which the nonpecuniary aspects of the military and civilian life are seen as more closely substitutable. Without a relatively high perceived risk of injury or death, a youth may be more likely to respond to pecuniary incentives.

[16] Most of the enlistment studies restricted analyses to the physically eligible youth in the top three AFQT categories. This was done because throughout the period of investigation the demand for youth in mental group IV fluctuated (Wool, 1968).

The denominator of the enlistment ratio usually consisted of eligible males aged 17 to 20, which excluded a relevant segment of the population--i.e., men 21 through 26 years of age. Older youth were excluded because they represent a relatively small share of the initial enlistments, and because they tend to be sensitive to draft pressure.[19] However, this restriction disproportionately excluded those who enlist during or after college. This is a significant oversight because Wool found that, as of 1964, approximately half of all young men with college experience had enlisted.[20] Another problem of early studies[21] is that they excluded enrolled youth from their population base. Doing so lowered the denominator and thereby raised the value of the dependent variable in high income regions where otherwise eligible young men are more likely to be in school. This method increased the value of the dependent variable, possibly distorting the impact of the independent variables on the enlistment rate.

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[17] Draft pressure will be defined in a subsequent section.

[18] See for example, Altman and Fechter (1967), Cook (1970), Fechter (1970), and Gray (1970).

[19] Fechter (1970).

[20] Wool (1968, p. 108).

[21] Altman and Fechter (1967); Altman (1969); Fisher (1969).

Unlike the studies which utilized aggregate data, Johnston and Bachman explored enlistment utilizing sample survey data. The Youth in Transition (YIT) study followed a sample of more than 2,000 young men from the tenth grade (fall 1966) to the summer of 1970. By 1970, 14.5 percent of the sample had attempted to enlist.[22] The dichotomous dependent variable took on the value of "1" if an individual enlisted or attempted to enlist in the year following withdrawal or graduation from high school. Hence, their analysis differed from the larger "ever enlist" question because it excluded young men who enlisted or attempted to enlist more than one year after leaving high school.

Johnston and Bachman excluded from analysis[23] individuals with other military experience. In addition, the enlistment behavior of college students was ignored; in fact, college was defined as a nonenlistment activity. Moreover, the majority of the Johnston and Bachman sample graduated from high school and made decisions about the armed forces in 1969. Hence, the generalizability of their findings over time is limited.

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[22] Johnston and Bachman (1972, p. 21).

[23] These include individuals who (1) were drafted, (2) joined the National Guard or Reserves, (3) entered a military academy, or (4) who were currently in the military but entry method was unknown (Johnston and Bachman 1972, p. 177).

In the current study, the binary enlistment dependent variable was constructed, where possible, utilizing the respondents' self-reported method of entry. When the self-report is unavailable,[24] duration of service is used in these cases as on indicator of enlistment status. If a young man served more than 26 months, he was coded as having enlisted. This method of determining enlistment status tends to understate the true proportion who enlisted, because some enlistees were discharged prior to serving their full terms (e.g., for health problems).[25] Nevertheless the enlistment measure in this analysis avoids the problems of the aggregate studies and permits greater generalizability over the Vietnam era than does the measure in the Johnston and Bachman study.

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[24] Method of entry was asked in the 1966, 1969, and 1971 surveys. Hence, entry method is unknown for respondents who were members of the armed forces in 1971.

[25] Reason for noninterview is used to construct the "enlistment" dependent variable for respondents who had not returned to the sample in 1973. If reason for the interview was "armed forces" in three consecutive surveys, the respondent was coded "1" on the enlistment variable.

The Likelihood of Being Drafted

As is true for the enlistment measure, method of entry and duration of service are used to construct the dependent variable distinguishing the draftees from all others. If a respondent reported that he was drafted or in the absence of information on method of entry, if he served between 18 and 24 months, he was coded as having been drafted.

The Independent Variables

Labor Market Variables: Earnings

Most previous studies measured relative earnings differentials as a ratio of military earnings to civilian earnings and have adjusted military earnings to reflect the value of income in kind, such as housing and medical services. However, there have been many variants used in operationalizing the earnings differential concept. Some studies used the present values of average yearly earnings in the civilian and military sectors. Other studies did not discount, on the grounds that it is crucial only if the time patterns of civilian and military income differ significantly.[26] Fechter employed in his model the absolute values of military and civilian earnings. Finally, Johnston and Bachman utilized only the civilian component or the typical wage of an unskilled worker in the youth's local labor market.

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[26] Fisher (1969).

The method of measuring civilian earnings differs among studies. The most common source of divergence is the age base used to determine the aggregate civilian earnings. For example, Altman utilized income information for young men aged 16 to 21, Gray used data for the men 21 to 27, while Fisher used an index that weighted the median income of young men 14 to 19 two-thirds and the income of youth 20 to 24 one-third. Differences among studies are not of great concern per se. Indeed, insofar as different measures of the same concept yield similar results the reliability of the generalization is increased. However, a problem occurs when there is lack of correspondence between the dependent variable and the civilian earnings measure; i.e., when there is a significant age difference between the group whose earnings are used and the group that forms the denominator of the dependent variable. Neither the early studies nor the Gates Commission studies have perfect correspondence between the two measures. Gray, for instance, used earnings of white males 21 to 27 years old. His enlistment measure, on the other hand, was based on the number of eligible youth between the ages of 18 and 21. Hence, he used the earnings information of an older group of men to predict enlistment of a younger set. Males between the ages of 21 and 27 have had a greater opportunity to develop human capital and become established in their career paths. Moreover, the earnings of veterans are included in calculating the civilian earnings opportunities.

Another problem has plagued the earnings measure used by most previous studies. Estimates of civilian pay have necessarily been based on the earnings of both eligible youth (those who fall into the top three mental groups) and ineligible youth (those from the two lowest mental groups). Inclusion of the ineligible youth tends to bias downward the estimate of civilian earnings for the relevant population.[27] The extent of the bias is a function of the earnings differentials between eligible and ineligible youth and the ratio of eligibles to ineligibles in the given region or state. Karpinos has shown that rates of rejection of draftees for mental ability reasons vary considerably among states and regions. This affects the ratio of eligibles to ineligibles among regions/states. Moreover, in states where rejection rates are higher eligible youth face relatively more draft pressure since the eligible pool is smaller. Thus the disproportionate draft pressure levels may cause relative earnings measure to vary directly with the dependent variable.

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[27] Kohen (1973), among many others, found that mental ability plays a significant role in labor market success. Dropouts tend to be disproportionately clustered within the lower mental ability categories.

The enlistment model can be viewed as a variation of a simple labor supply equation with labor force participation as the dependent variable. Labor force participation is assumed to be a function of (civilian) earnings and several other variables. However enlistment, unlike the labor supply model, is postulated to be a function of earnings differentials between two markets.

Labor force participation models which use micro data and average hourly earnings are superior to studies which use aggregate earnings measures, because the wage rate is less likely to be affected by hours worked.[28] In other words, average hourly earnings are independent of supply factors. Enlistment models containing aggregate earnings measures are also affected by hours worked. Hence this study will employ average hourly earnings at the current or last job as the civilian earnings measure.

Civilian wage, however, cannot be observed for some respondents. This occurs because many men go directly from school into the armed forces. To alleviate this problem a potential wage[29] is estimated. This method involves first estimating an ordinary least squares regression using the wage rate of employed nonstudents as the dependent variable. Actual hourly earnings are expected to be related to an individual's education, training, work experience, tenure, health, socioeconomic status, South/non-South residence, size of local community, and the understanding or knowledge of the world of work. (See Appendix A for a more detailed specification of the potential wage equation.) Since we are interested in the wage prior to military service, the wage estimate utilizes pre-service traits.

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[28] Greenberg and Koster (1973).

[29] The potential wage is most commonly found in female labor supply models. For example, see Kniesner (1976); Leibowitz (1972); Mott and Moore (1977); Mott and Shapiro (1977).

The NLS survey instrument does not include an estimate of the military pay a youth could anticipate. Hence, the earnings measure in this study will incorporate only the civilian component rather than earnings differentials.

Labor Market Variables: Unemployment

The unemployment measure in many of the enlistment studies consisted of the unemployment rate of young men within the age range of 18 to 20.[30] Youth from the lowest mental groups were thus included in the unemployment rate measure. There is evidence to suggest that youth from AFQT categories IV and V experience unemployment at higher rates than the eligible youths in the top three mental groups.[31] In addition there are documented regional/state differences in the AFQT mental ability distribution.[32] The different ratios of eligibles to ineligibles among states combined with the higher unemployment rate among ineligibles tend to bias the estimated effect of unemployment upward and to distort the true relationship.

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[30] See for example Altman (1969), Altman and Fechter (1967), Cook (1970), Fechter (1970), Fisher (1969), Gray (1970).

[31] Grasso found that, controlling for many other factors, male high school dropouts experience significantly higher unemployment both in terms of incidence and duration. Furthermore, high school dropouts are disproportionately clustered in the lower mental ability categories. (Grasso, 1977, p. 149).

In addition, the unemployment rate suffers from problems caused by the aggregation of time series data. Unfortunately, aggregation often results in a simultaneity problem. Specifically, an aggregate unemployment rate reflects both demand and supply forces. It is impossible to isolate the effect of each of the two market forces on the enlistment rate. Both Fechter and Cook used a highly age-specific unemployment rate (men aged 16-19) in their models. On the demand side, the unemployment rate for youth of this age is very sensitive to armed forces manpower policy. If the armed forces implemented a policy which increased the level of military manpower such as raising entry wages or augmenting draft calls, a higher level of enlistments would follow. This would siphon young men from the civilian sector, which in turn would reduce the unemployment rate for male youth. On the supply side, a high youth unemployment rate would reduce expected civilian income, thereby increasing the relative attractiveness of military service and increasing enlistment rates. Hence, given these potentially offsetting labor market forces, the lack of a relationship found in the Gates Commission studies between unemployment rates and enlistment is not surprising. On the other hand, an individual's unemployment experience is less likely to reflect the armed forces manpower policies.

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[32] Karpinos (1966).

Johnston and Bachman used a local area unemployment rate as their unemployment measure. However, the collinearity between wage levels for the unskilled (their earnings measure) and the local area unemployment rate make it difficult to distinguish the separate effects of these variables on enlistment.

This study will overcome some of the simultaneity problems of aggregate unemployment rates by using the respondent's actual unemployment experience as the unemployment measure. It will be operationalized as the duration (measured in weeks) of unemployment experienced by a youth in the year of draft eligibility. Since the number of weeks in the labor force (and hence the exposure to potential unemployment) in the year before entering the military varies for different individuals and because the period after leaving school often marks a young man's first labor market experience, a category representing those youth with limited civilian work experience will be included.[33]

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[33] Limited civilian work experience is defined as less than 11 weeks of civilian labor market experience in the year of draft eligibility.

It should be noted that the Vietnam war and concomitant Selective Service draft policy may have served to distort the true meaning of the unemployment variable. Since the draft was a real possibility for young men of this period, employers may have been reluctant to hire youth whom they perceived as being liable for the draft. In addition, the reemployment rights legislation made prospective draftees a financial risk. Hence, youth who were draft eligible may have had a difficult time finding work and thus may have experienced above average levels of unemployment.

Education

The student deferment makes accurate measurement of preservice education levels critical. Johnston and Bachman explored the likelihood of enlistment in the year after high school graduation.[34] Hence, they did not address the enlistment behavior of college students. Their research design automatically defined college attendance and enlistment as mutually exclusive events. This is a problem because many individuals enlist during their college years or upon graduation (especially participants in ROTC's).

In addition the YIT sample was selected by educational level (10th grade in 1966) and not by age. Thus the authors were unable to explore the relationship between enlistment and education levels below grade 10. The NLS data enabled Kohen and Shields to investigate the relationship between pre-high school educational attainment and the likelihood of service. However, at the time of the initial survey more than half of the NLS sample was over age 18, and approximately 250 respondents were Vietnam era veterans. Thus, it was necessary for Kohen and Shields to rely, in some cases, on retrospective information. In order to insure that educational attainment related to status prior to military service education was measured as of the respondent's eighteenth year.

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[34] In the case of high school dropouts the authors look at the likelihood of enlisting by 1970, the year they theoretically would have graduated if they had continued in high school at a normal pace.

While age 18 may not give precise characteristics at the time of enlistment or induction it is a good proxy. Both eligibility to serve without parental consent and draft registration occur at the eighteenth birthday. Nevertheless, this method of measurement presents some problems. Education measured at age 18 is an inadequate proxy to assess the long-run effects of the student deferment on the likelihood of service, since it does not differentiate between the college dropout and the college graduate. It is important to distinguish between the two because a youth who used the 2-S (student deferment) for a year or two and subsequently dropped out of college was highly liable for the draft. On the other hand, the youth who was continuously deferred throughout college increased draft avoidance avenues (e.g., occupational or hardship deferments).

In this study, the education variable takes the student deferment into account. Education is measured as highest grade completed in the survey year that the respondent ends continuous enrollment.[35] This is theoretically the first year of draft eligibility. By using an initial sample of nonveterans who are 14 to 20 years old, it is possible to ensure that the education variable measures preservice educational attainment. For the respondents who did not receive post-high school formal education, preservice education is measured as of the year corresponding to their eighteenth birthday.

There are a number of other variables which like education require preservice measurement. Health condition, presence of dependents, duration of unemployment, draft pressure, potential wage, and region of residence are measured as of the year of draft eligibility.

Health

Most previous studies dealt with the health measure by excluding individuals with health exemptions from analysis. Kohen and

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[35] In cases where a student respondent left the sample, it was assumed that he completed the grade he attended in the last survey year he was enrolled. This assumption in the variable construction tends to overstate the actual educational attainment of the sample. However, assuming that the respondent did not complete the grade he was attending would result in a larger distortion. Myers found that approximately 80 percent of the young men in the NLS completed, within one calendar year, the college grade that they were attending (Myers 1977, Table A3).

Shields, on the other hand, explored a young man's measured health status as of his 18th year. The health variable in this study, like that of Kohen and Shields, is based upon the respondent's self-reported health condition. It is a dichotomous variable which takes on a value of "1" if the respondent reported a health problem which limited school or work.[36] This measure is used as a proxy for minimum health standards set by the armed forces.[37]

Mental Ability

Many studies, especially those conducted by the Defense Department used the Armed Forces Qualification Test (AFQT) as their measure of ability. The AFQT is the basic military mental test. It was designed through the joint efforts of all the military services and is administered to every registrant examined for military service. The Armed Forces divided the percentile scores on the AFQT into five mental group categories which indicated gradations of trainability.[38] Registrants classified as mental group I-IV are eligible to serve. Mental group V (the lowest group) represent about 10 percent of the population and are mentally disqualified from service.[39]

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[36] Health condition was not asked of respondents in 1967 and 1969. In these years health condition was determined incorporating information from subsequent surveys. For example if respondent was draft eligible in 1969 and he reported a health limitation in 1970 which lasted a year or more he was coded "1" on this variable.

[37] This variable does not have perfect correspondence with the armed forces health standards. Clearly, there will be individuals who have health problems sufficient to meet the armed forces exemption criteria yet do not perceive these problems as limiting their school or work activities (e.g., the accountant with diabetes). On the other hand, there will be individuals who perceive a work or school-limiting condition yet meet the armed forces eligibility requirements.

The previous enlistment studies which used time series data used the AFQT grouping to exclude individuals classified as mental group IV from analysis. By excluding category IV individuals from analysis the enlistment studies omitted a significant portion of the population. For example, in 1966 approximately 13 percent of the new enlistees were members of mental group IV.[40]

Johnston and Bachman used the General Aptitude Test Battery (GATB-J) in their study. The GATB-J was administered to the entire YIT sample during the first interview. It was found to correlate highly with the AFQT.[41]

The mental ability measure used in the present study is weaker than the GATB-J used by Johnston and Bachman. The mental ability measure used here was constructed using data obtained from a survey conducted in 1968 of the high schools attended by members of the NLS sample. It represents ability as of about the tenth grade.[42]

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[38] The content areas of the AFQT include: vocabulary, arithmetic, spatial relations and mechanical (Karpinos, 1966, p. 96).

[39] Supplement to Health of the Army, (March 1967, p. 9).

[40] Ibid., p. 52.

[41] Johnston and Bachman (1972, p. 84).

Unfortunately, this variable has a high NA (not ascertainable) rate. Moreover, the NAs are concentrated toward the lower end of the IQ distribution. All youth who had not entered high school by 1966 were coded NA because there were no provisions in the survey design to collect the relevant information from primary schools. Furthermore, the high school nonresponse rate was higher than average among rural (black) Southern schools. In addition, even when these schools responded to the questionnaire, IQ scores often were not reported (i.e., were not retrievable from school records) if the respondent was in his twenties. A consequence of this bias is that a negative relationship between NA on IQ and the three dependent variables is expected. Since the NA rate is not insignificant,[43] mental ability will be represented in categorical form with a separate NA category. For purposes of this study the IQ variable is divided into four categories; above average (top 23 percent); average (middle 54 percent); below average (lower 23 percent); and NA.

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[42] The variable was constructed using seven major categories of tests; examples include the Otis Quick Scoring Test of Mental Ability, California Test of Mental Maturity, Henman-Nelson Test of Mental Ability, PSAT and SAT. For further details see Kohen (1973).

[43] Approximately 27 percent of the whites and 55 percent of the blacks are NA on the mental ability measure.

Dependent Status

In general, eligibility for a hardship deferment implied that a young man was a father. Kohen and Shields used a variable which measured the presence of children as of the respondent's eighteenth birthday. Measuring the presence of children at age 18 omits the case where a child was born while his father was deferred for other reasons. This study will partially overcome this problem by accounting for the presence of children after the expiration of a potential student deferment. The measure is dichotomous, taking a value of "1" if the respondent has children.

Draft Pressure

Draft pressure variables are found in much of the enlistment literature. The objective of these enlistment studies was to estimate the impact of military pay on the numbers of "true" volunteers. Hence, it was necessary to develop accurate methods for estimating the number of initial-duty true enlistees. Basically, the enlistment studies used two methods to estimate the number of "true" volunteers, documentary and survey. The documentary method consisted of "the observed relationship between changes in the rate of inductions or the rate of call-ups for preinduction examinations and the enlistment rate."[44] Fechter used the documentary method. He defined draft pressure as the number of inductions per thousand 17 to 24 year olds in the population. In the survey method, utilized by Gilman, first term personnel were asked whether they would have enlisted in the absence of the draft. The choice of a "true" volunteer rate is somewhat arbitrary because responses vary by the respondent's length of duty.[45]

Unfortunately, the documentary and survey methods give different "true" volunteer estimates. The observation method generally provides a lower estimate of the draft's impact. As a consequence, it yields a higher number of "true" volunteers among the initial duty enlistees. However, the observation method is not reliable because changes in quarterly induction call-ups often vary in response to changes in quarterly enlistments rather than the reverse.[46] Hence, changes in conscription rates are not likely to reflect changes in the enlistment rate rather than long run variations in the probability of being drafted.

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[44] Gilman (1970, II-1-5).

[45] Ibid, II-1-7.

[46] Ibid, II-1-6.

In their enlistment study Johnston and Bachman utilized a refined draft pressure measure based upon (1) whether the respondent had a "semi-permanent deferment"; (2) whether he planned to enter a deferable activity (e.g., college) after high school; and (3) age. Their measure is designed to assess the impact of draft pressure on enlistment behavior in the year after high school. Because the YIT sample is a grade cohort the year after high school was the period between the spring of 1969 and 1970 for most respondents. Hence, Johnston and Bachman dealt with enlistment at a single point in time and did not assess the impact of changing environmental conditions such as increased draft calls or an intensifying war.

Kohen and Shields measured draft pressure by a dummy variable which accounted for periods of high draft calls ("1" if respondent was age 18 in 1966-1968, "0" otherwise). In the present study, the same logic is used but the measure is refined to refer to time of draft eligibility rather than to the respondent's eighteenth birthday.

Residence

Throughout the relevant literature, the operationalization of geographic region of residence has been accomplished through a dummy variable representing the South. Urbanicity, on the other hand, has been virtually ignored. Only two studies (Johnston and

Bachman and Kohen and Shields) have examined the impact of both region and urbanicity. Johnston and Bachman categorized the regions into the West, North Central, Northeast, and South. The urbanicity measure had five categories ranging from rural to cities over 50,000. Kohen and Shields combined region and urbanicity into a single variable with five categories: Northeast, North Central, West, South-urban and South-rural.

In order to take account of possible differences in draft calls between the central cities and the other regions in the Northeast and North Central regions the present study incorporates a central city/noncentral city interaction term for the Northeast and North Central regions into the model.[47] The remaining three region/urbanicity categories are South/rural, South/urban and West.

Socioeconomic Status

Fligstein measured socioeconomic status (SES) by means of the Duncan Socioeconomic Index of the respondent's father's occupation. Father's education also enters Fligstein's model as a measure of minimum mental capacity. However, education is a key component of the Duncan Index.[48] Thus both father's education and occupational status (as measured in part through father's education) entered Fligstein's model. The collinearity between these variables increased the standard errors[49] and in this way reduced the likelihood of achieving statistical significance. In addition, his SES measure did not take into account the multidimensionality of socioeconomic status. The indexes used by Johnston and Bachman[50] and Kohen and Shields are clearly superior.

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[47] A central city/noncentral city variable is used in lieu of a central city, "suburb" (in SMSA but not in central city) and rural categorization because there are a limited number of black respondents residing in the rural Northern regions.

This study will utilize the same measure as did Kohen and Shields. The index is based upon five components: (1) father's education; (2) mother's education; (3) father's occupation; (4) oldest older sibling's education; and (5) the availability of reading material in the home at age 14. The variable is continuous. SES categories were constructed incorporating information about the distribution. The medium SES category includes youth who are within one standard deviation of the mean. High and low categories include the remaining individuals at the respective tails of the distribution.[51]

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[48] Duncan (1961).

[49] Theil (1971, p. 153).

[50] Johnston and Bachman's index consists of six equally weighted parts: (1) father's occupational status (Duncan score); (2) father's educational attainment; (3) mother's educational attainment; (4) number of rooms per person in the home; (5) number of books in the home; and (6) a checklist of other belongings in the home (p. 108).

Knowledge of the World of Work

The knowledge of the world of work measure is based upon an Occupational Information Test given to the youth in the initial survey. The test itself is shown in Appendix D.

> "The Occupational Information Test was scored as follows: Each of the Occupational identification questions was assigned two points, so that scores on this component could range from 0 to 20. On the educational component, respondents were given four choices for each occupation: 'less than a high school diploma, a high school diploma, some college, a college degree.' For most of the occupations, responses were scored either 0, if incorrect (or if the occupational identification itself was incorrect) or 2, if correct. In several cases, either of two responses was given full credit, or one response was given full credit and another half credit. For example, in the case of stationary engineer, 2 points were awarded for either the response 'high school diploma' or 'less than a high school diploma.' (In 1960, 45 percent of male stationary engineers had less than a high school education but 24 percent were graduated from high school and 31 percent had gone beyond.)"[52]

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[51] The mean of this measure is 10 and the standard deviation 3. For further information on the construction of the SES index see Kohen (1973).

[52] Parnes and Kohen (1973, p. A.3).

The reliability of the Occupational Information Test is quite good. Parnes and Kohen reported that the reliability was calculated to be .69, using the Kuder-Richardson formula, and .73 using the Spearman-Brown interitem correlation reliability measure.

Statistical Methodology

The hypotheses described in the preceding chapter will be tested by means of Multiple Classification Analysis (MCA),[53] a version of multiple regression analysis with all the explanatory variables expressed in categorical form. The MCA technique permits one to calculate the mean value of the dependent variable for each category of a particular explanatory variable, "adjusted" for the effects of all other variables in the model. Differences in these values among the several categories of a given variable may be interpreted as indicating the "net" effect of that variable upon the dependent measure. To provide a specific example, the MCA technique allows one to calculate for each SES category of youth what the proportion of the category who served would have been had the members of that category been "average" in terms of all the other variables entering the analysis.[54]

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[53] Given the well known statistical problems of dichotomous dependent variables in multiple regression analysis (e.g., heteroscedasticity), the models will also be estimated using logit analysis.

[54] For a detailed discussion of the MCA technique see Andrews, Morgan and Sonquist (1967).

Test statistics for the total MCA include the multiple correlation coefficient (R^2) and an F-ratio. An F test is also available for each variable and a t-ratio for categories within the variable. For example, the impact of IQ on the probability of serving as shown through the "F" statistic. The t-ratios associated with categories within the IQ variable will permit tests of whether youth with above average, average, or below average levels of mental ability are significantly more or less likely to enter the armed forces than the mean.

The sample used in this present study is well suited for MCA. Reliable estimates using MCA require adequate sample cases within each category of the independent variable. The large sample used in this study easily meets this criterion.

CHAPTER FOUR

EMPIRICAL RESULTS

Introduction

In this chapter the hypotheses of Chapter Two will be tested and the empirical results will be presented. The first section is a broad overview of the findings. The second section deals with factors related to the likelihood that a young man enlisted in the armed forces. The third and fourth sections respectively examine the characteristics associated with conscription and service. The final section highlights some of the important findings discussed in the previous sections.

Overview

For the Vietnam era as a whole 28 percent of the whites and 27 percent of the blacks participated in the armed forces (see Table 4). After excluding those classified 4-F (7 percent of the white population and 16 percent of the blacks), the proportion that served increased slightly and was 30 percent for the whites and 31 percent for the blacks. Hence, consistent with much of the current literature of the Vietnam era a smaller proportion of the men compared to the early Cold War or Korean periods, actually served. Furthermore, participation between blacks and whites was not significantly different.

Table 4 The Percent who Served, Enlisted or were Drafted, by Race and Eligibility

	Sample Size	The Percent[a] that Served	The Percent[b] that Enlisted	The Percent[b] Drafted
Whites				
Total[c]	2,646	28	18	7
Eligible[d]	2,467	30	19	8
Blacks				
Total[c]	1,141	27	16	9
Eligible[d]	953	31	19	10

[a] A respondent had to have served 6 months or more to be coded "1" on any of the dependent variables.

[b] These proportions were constructed using the respondents' self reported entry method (e.g., conscription or enlistment), and in the absence of information on entry method, duration of service. The proportion that enlisted or was drafted does not sum to the total proportion who served because when entry method was not ascertainable, youth who served less than 18 months or 25-26 months were coded as neither draftees nor enlistees on the respective dependent measures.

[c] This universe consists of respondents who were (1) 14 to 20 years of age in 1966 and (2) not veterans when they entered the sample.

[d] Respondents were omitted from this universe if in any survey year they were classified as 4-F or not eligible for service.

In addition to the likelihood of serving, the draft and enlistment proportions presented in Table 4 show few differences either by race or eligibility status. Nevertheless, the patterns of participation and conscription merit discussion. When the sample includes the non-eligible, whites enter and enlist at higher rates than blacks but have a lower draft rate. On the other hand, when the non-eligible are excluded, the black rates on all three measures are all greater than or equal to those of whites.

Although blacks were drafted at greater rates than whites, the dramatic inequalities between "eligible" blacks and "eligible" whites of the early 1960's discussed by the Marshall Commission seemed to have disappeared.[1] Hence these gross findings suggest that a degree of social equality was achieved.

The Likelihood of Enlisting: MCA Results and Interpretations

Introduction

As has been noted, approximately 18 percent of the white and 16 percent of the black respondents enlisted during the course of the Vietnam era.[2] Although the grand means for the two racial groups are very similar, there are many differences between the groups in the factors that are associated with the likelihood of enlistment (see Table 5). The results will therefore be discussed separately by race, and differences between the races will be discussed at the conclusion of this section.

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[1] The Marshall Commission found that 30.2 percent of the qualified blacks were drafted compared to 18.8 percent of their white counterparts. The National Advisory Commission on Selective Service (1967, p. 22).

[2] The factors significantly associated with the likelihood of enlistment are about the same irrespective of how the universe is specified. The results shown in the body of the text relate to

The Determinants of Enlistment Among Whites

On the whole, the findings of the MCA model for whites support the hypotheses presented in the previous chapter. Variables such as health, dependent status and draft pressure are significant and perform as anticipated.

As hypothesized, high school graduates and respondents with average levels of mental ability were significantly more likely to enlist. This was expected because high school graduates and individuals with average levels of mental ability would be more likely than those with low ability and educational attainment to meet the armed forces minimum mental requirements; and would also be more likely than college graduates to benefit from the armed forces technical training programs.

Contrary to the hypothesized association, high school dropouts (those with 9-11 years of school completed) were significantly less

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the total universe. Appendix B contains the results when the ineligibles are excluded from the universe. References to results from Appendix B will occasionally be incorporated within the text. In addition, Appendix C contains the logit results. The logit results correspond closely to the MCA findings and will also be referred to occasionally in the text.

Table 5

The Likelihood of Enlisting in the Armed Forces during the Vietnam Era: MCA Results

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Education[a]				(7.22)##				(3.96)##
0-8	123	11	14	-1.22	150	5	8	-2.67**
9-11	373	15	14	-2.23*	321	14	16	-0.11
12	1054	24	23	4.72**	459	20	20	2.86**
13-15	586	19	16	-1.78*	150	21	15	-0.21
16	374	11	16	-0.85	51	10	6	-1.91*
17+	136	5	12	-1.63	10	c	c	c
Dependents[a]				(9.37)##				(1.16)
None	2483	19	19	3.00**	1017	17	16	1.05
Some	163	4	10	-3.00**	124	10	13	-1.05
Draft Pressure[a]				(102.62)##				(7.08)##
High	956	28	28	9.33**	461	19	19	2.52**
Low	1690	13	13	-9.33**	680	14	14	-2.52**
IQ				(3.08)#				(6.83)##
Low	212	19	16	-0.82	246	15	13	-1.43
Medium	1077	22	20	1.76*	219	24	23	2.72**
High	635	17	20	1.10	21	43	40	3.02**
NA	722	14	15	-2.36*	655	13	14	-1.76*
Residence[a]				(2.06)				(5.15)##
NE Central City	178	19	20	0.53	98	10	8	-2.08*
NE Other	452	19	20	0.91	51	8	5	-2.15*
NC Central City	207	13	17	-9.46	176	14	10	-2.04*
NC Other	601	20	19	0.45	22	5	0	-2.24*
South Urban	360	22	22	1.82*	368	21	20	2.87**
South Rural	444	17	13	-2.63**	373	16	20	1.96*
West	404	18	18	-0.11	51	6	6	-1.92*
NA					2	c	c	c
Health Problem[a]				(48.71)##				(3.25)
No	2346	20	20	6.91**	1054	17	17	1.76*
Yes	300	4	5	-6.91**	87	6	9	-1.76*

(Table continued on next page)

Table 5

Continued

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted Percent[b]	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted Percent[b]	(F-ratio) t-ratio
Potential Wage[a]				(18.90)##				(2.04)
Low 0-$1.80	263	19	26	2.60**	380	14	13	-1.42
Med $1.81-$2.50	1598	23	21	3.66**	463	20	18	1.26
High $2.51+	653	8	10	-4.25**	132	14	16	0.02
NA	132	14	12	-1.35	166	11	17	0.21
Unemployment[a]				(28.26)##				(6.79)##
Less than 10 weeks work experience	104	19	17	-0.38	89	10	11	-1.33
Low	1272	16	14	-5.37**	491	13	13	-2.79**
Med	415	12	13	-3.49**	232	16	16	-0.22
High	166	12	13	-1.77*	105	12	14	-0.49
NA	689	28	31	9.58**	225	26	27	4.67**
SES				(1.92)				(2.81)#
Low	453	17	18	-0.48	574	16	18	1.19
Med	967	19	18	-0.72	336	18	16	0.17
High	1146	18	19	0.32	85	15	11	-1.23
NA	80	17	28	1.43	146	11	11	-0.72
Total or average	2646				1141			
Grand mean			18				16	
$\hat{R}^2$			12				7	
F-ratio			13.88				4.17	

Universe: Respondents 21-27 years old in 1973 who were not discharged from the armed forces prior to the 1966 interview.

[a] The characteristic is measured as of the year of draft eligibility.

[b] Adjusted by multiple regression technique of holding constant all other variables shown in the table.

[c] Percentage not shown when the category contains less than 20 respondents.

# Statistically significant at the .05 level.
## Statistically significant at the .01 level.
* Category is significantly different from the grand mean at the .05 level.
** Category is significantly different from the grand mean at the .01 level.

likely than average to enlist. Further, there is a significant gap between the enlistment rates of high school graduates and dropouts (14 percent of the dropouts enlisted versus 23 percent of the graduates). The explanation does not seem to stem from the greater propensity of dropouts to fail the mental examination, for results from the "eligible" model reveal the same pattern between dropouts and graduates (see Appendix B). Hence the lower-than-average enlistment rates of high school dropouts is surprising. Like high school graduates, high school dropouts would feel draft pressure; furthermore, they would benefit from the armed forces training programs. Perhaps the same factors that led dropouts to have rejected the educational system caused them to be reluctant to enter the regimented life of the armed forces.

The results for respondents who had formal training beyond high school are also unexpected. College graduates, contrary to hypothesis, enlisted at rates not significantly different from average. Although the unadjusted proportions suggest a different picture (11 percent of the college graduates enlisted), after controlling for other factors the graduate enlistment rate rose to within two percentage points of the average. The findings are similar for respondents with post graduate training. Perhaps enlistment among college graduates was motivated by the Selective

Service policy of inducting the oldest first.[3] On the other hand many college graduates participated in ROTC and enlisted after graduation to fulfill that obligation.

The potential wage variable exhibits the hypothesized inverse relationship. Among respondents with a low potential wage, 26 percent enlisted whereas only 10 percent of the young men with a high potential wage entered the armed forces as a volunteer. This finding supports the findings of the Gates Commission, and rejects those of Johnston and Bachman. Problems with the duration of unemployment variable (high NA rate correlated with enlistment) make it difficult to draw firm conclusions concerning the relationship between unemployment experience and enlistment.

Contrary to hypothesis, enlistment was found to be unrelated to socioeconomic status. In addition, this was true in the cases of both the gross and net relationships. However, enlistment motivation among respondents from different SES categories may have derived from different sources. For example, individuals from higher SES categories may have enlisted to avoid the draft. On the other hand, respondents in the lower SES category perhaps enlisted to take advantage of benefits such as post-service education, free medical care or technical training.

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[3] It should be noted that the draft pressure variable controls for environmental conditions rather than individual draft pressure.

The significance level for the region and urbanicity variables was not high enough to make confident statements about the impact of region and urbanicity taken as a whole. However, men from the South had enlistment rates significantly different from other men. As hypothesized, urban Southerners enlisted at rates significantly above average (22 percent) while rural Southerners enlisted at below average rates (13 percent). The military seems to have held its traditional appeal to residents of the urban South. The low incidence of enlistment among rural Southerners probably stems in large part from the agricultural deferment.[4] The alternative explanation that rural Southerners are more likely to fail the armed forces mental requirements does not seem to hold true, for when the analysis is restricted to those eligible for service the same significant negative relationship is observed between residence in the South and the probability of enlistment. (See Table 12 Appendix B).

Consistent with hypothesis, when the eligible universe alone is examined, individuals with reported health limitations continue to enlist at significantly lower than average rates. Perhaps men with health limitations were less likely to enlist because they assumed that their health limitation protected them from the draft. On the other hand, men with reported health problems are more likely to be classified 1-Y (temporary health deferment). Perhaps these men were able to extend repeatedly the protection of the temporary 1-Y deferment making it a de facto permanent 4-F.

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[4] Fligstein in his analysis of who served found a negative relationship between a farm origin and the likelihood of service (Fligstein, 1977, p. 82).

The Determinants of Enlistment Among Blacks

A different set of explanatory factors seem to explain enlistment among blacks. Surprisingly, blacks with dependents enlisted at the same rate as blacks without the responsibility of children. This suggests that black fathers may have perceived the benefits of service to themselves and their family (medical care, secure steady employment, etc.) as being high enough to offset the advantages of using their deferment and remaining in the civilian sector. It is difficult to interpret the findings for the health variable. The F-ratio associated with the health measure is not significant. On the other hand, each of the t-ratios corresponding to the two categories within the variable is significant at the .05 level. The logit results help resolve this ambiguity. The health variable in the logit equation (see Appendix C, Table 15) is significant (at the .05 level) and performs as hypothesized. On the basis of all the evidence it seems safe to conclude that blacks with reported health limitations enlisted at rates significantly below average.

Most of the hypothesized relationships between education levels and enlistment are confirmed. High school graduates enlist at significantly greater rates than average. As hypothesized, enlistment was significantly below average for respondents with both the highest and lowest levels of educational attainment. Many young men with 0-8 years of education probably failed to meet eligibility requirements. Black college graduates, on the other hand, perhaps preferred the civilian labor market where, relative to other blacks, their chances of success were fairly high. Interestingly, college and high school dropouts enlisted at similar rates which were not significantly different from average (16 percent for the high school dropouts and 15 percent for the college dropouts). College dropouts probably enlisted at greater rates than graduates because unlike graduates they did not have a diploma--a key credential in the civilian labor market. In addition, they would benefit from the post service educational benefits of the GI Bill. An additional factor in the case of high school dropouts is the possibility of their using the military experience as a substitute for a high school diploma. Employers may view a successful term of duty in the armed forces as evidence that the high school dropout possesses qualities of a good employee such as promptness, dependability and the ability to carry out instructions.

The region and urbanicity variable was strongly associated with enlistment. In short, blacks from the South enlisted at above average rates while respondents who resided in the Northern and Western regions enlisted at significantly below average rates. The escape and opportunity hypothesis discussed by Johnston and Bachman seems to be confirmed. In the South, which has traditionally been viewed as more discriminatory, enlistments were higher than in the relatively less discriminatory North. Aside from the escape and opportunity hypotheses, anti-war enlistment among Northern blacks may have reduced the rate of enlistment in these regions.

Like education, mental ability was a significant predictor among blacks. Both high and average levels of mental ability were significant and positively related to enlistment. Most interesting is the unusually high rates of enlistment among men with high levels of measured mental ability. Forty percent of the high ability group enlisted; this is 2.5 times higher than the overall black enlistment rate of 16 percent. It is surprising that high ability blacks enlisted at this rate when only 6 percent of black college graduates enlisted. Since a disproportionate number of high ability blacks probably completed college this suggests that high ability blacks who did not have the commensurate formal education perhaps saw the armed forces as an institution in which their ability would be recognized and rewarded.

Eblistment was significantly and inversely related to socioeconomic status. Blacks from the lower SES category were 7 percent more likely to enlist than men from upper SES backgrounds.

The labor market variables performed poorly. Although not statistically significant, the adjusted percentages suggest that individuals with high potential wages were more likely to enlist than those with a low value on that variable. Perhaps, the draft played a larger role in the enlistment decisions of blacks with high labor market potential. Enlistment as an alternative to the draft was superior from many perspectives e.g., training, choice of branch of service, GI Bill. Hence, the seeming non-responsiveness of blacks to traditional economic incentives may have been a very rational economic response in the face of the draft.

A rather straightforward interpretation follows from putting together the following findings for blacks: (1) low enlistments among college graduates; (2) high enlistments among Southerners; and (3) high enlistments among the lower SES group. That is, among those who did not see the labor market as rich in job opportunities (Southerners and those of lower SES), the military was a logical substitute for the civilian sector. Clearly, the draft may have prompted this choice. However, enlistment rates two times higher in the South (and two and a half times higher when ineligibles are excluded) than in the rest of the country indicate that there was more than conscription motivating enlistment. The military experience, in concert with postservice benefits (GI Bill), probably was viewed as a feasible avenue of economic advancement and (temporary) avoidance of racial discrimination.

The Determinants of Enlistment: Summary of the Findings

The contrast between the set of factors that explain white and black enlistment is striking. On the whole, white enlistment seems more responsive to institutional factors, civilian wages, and draft pressure. Blacks, on the other hand, are not as responsive to institutional factors or civilian wages; rather, blacks tend to choose the armed forces, (at least temporarily) as a substitute for the civilian labor market. For example, among whites the dependent status variable performed as expected and was significant at the .01 level. Black fathers in contrast, enlisted at rates not significantly different from those of men without children. Hence, it seems that whites took advantage of their deferred status while many blacks enlisted in spite of their option to remain in the civilian labor market.

Draft pressure had a strong and significant influence on the enlistment behavior of both racial groups. It seemed to have greater influence on whites, since 28 percent of the whites volunteered during periods of high draft calls versus 19 percent of the blacks.

High school graduates and respondents with average levels of measured mental ability, regardless of race, enlisted at disproportionate rates. But despite this important similarity, there are striking racial differences in enlistment levels by level of education and ability. For example, among whites, college graduates and individuals with high levels of measured mental ability enlisted at rates not significantly different from average. Black college graduates, in contrast, enlisted at rates significantly below average while high ability blacks enlisted at disproportionately high rates.

One of the purposes of draft policy change in the late 1960's was to insure that the student deferment did not become a de facto exemption. The "average" rate of enlistment among white college graduates suggests that to some degree this objective was met. It seems that black college graduates on the other hand viewed the civilian sector as more attractive and opted to take their chances with the draft.

Regional differentials in enlistment rates between whites and blacks are also noteworthy. Except for the rural South, where only 13 percent of the white respondents enlisted, the enlistment rates of respondents in all other regions were within four percentage points of the mean. Black enlistment rates outside the South, on the other hand, were all significantly below the mean.

There is also an interesting racial difference in the impact of socioeconomic status on enlistment. SES was significantly related to black enlistment but not so for whites. Both blacks and whites in the higher SES categories followed an enlistment pattern similar to college graduates of their race. Black college graduates and those from the upper SES levels enlisted at lower than average rates. Upper class whites and college graduates on the other hand, enlisted at average rates.

Another interesting racial difference is found in the impact of potential wage on enlistment. Potential wage was not significantly related to black enlistment while it was a strong predictor among whites. Perhaps this unusual racial difference is attributed to differences in the evaluation of the probability of being drafted. A perceived higher likelihood of being drafted among blacks with high potential in the civilian labor market would have led a larger proportion of these young men to enter voluntarily.

To reiterate, the results of Table 5 suggest that there are racial differences in the determinants of enlistment. Whites seem to respond to Selective Service variables, draft pressure and potential wage. There are two somewhat divergent trends among blacks. There seem to be extremes in enlistment rates within categories of the independent variables not common to whites. For example, enlistment among Southern blacks is twice as high as the enlistment rate of any other region. This and other findings lead to the interpretation that blacks who see the civilian labor market as having limited opportunity (South, lower SES) are more likely to enlist.

These relationships are consistent with findings of Moskos. In a large survey of enlistee Moskos reported that whites gave draft pressure as the most often cited reason for entering the military. Black volunteers, however, gave self-advancement as the most often cited reason for enlisting.[5]

The Likelihood of Being Drafted: MCA Results and Interpretations

Introduction

Unlike the enlistment model, very few variables achieve statistical significance in the model designed to explain the likelihood of being drafted (see Table 6). Mental ability, region and urbanicity of residence, knowledge of the world of work and socioeconomic status are among the variables which do not achieve significance for either blacks or whites. Although there are fewer racial differences, the findings in this section will be discussed separately by race.[6]

The Determinants of Being Drafted Among Whites

Selective Service and draft pressure variables are the strongest explanations of white conscription. An individual with perceived work or school-limiting health problems and/or with children was significantly less likely to be drafted. Not surprisingly, high

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[5] Moskos (1969, p. 148).

[6] As in the discussion of enlistment the findings based on the "qualified" universe will be discussed where relevant and are found in Appendix B Table 13.

Table 6

The Likelihood of being Drafted into the Armed Forces during the Vietnam Era: MCA Results

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Education[a]				(1.83)				(4.42)##
0-8	123	6	6	-0.50	150	2	2	-2.84**
9-11	373	9	8	0.38	321	7	6	-2.02*
12	1054	10	9	1.76*	459	14	13	3.71**
13-15	586	8	8	0.21	150	9	11	0.83
16	374	2	4	-2.44*	51	2	6	-0.73
17+	136	4	7	-0.29	10	c	c	c
Dependents[a]				(5.47)#				(4.89)#
None	2483	8	8	2.31*	1017	10	9	2.18*
Some	163	2	3	-2.31*	124	2	4	-2.18*
Draft Pressure[a]				(36.94)##				(35.40)##
High	956	12	12	5.59**	461	16	15	5.65**
Low	1690	5	5	-5.59**	680	5	5	-5.65**
IQ				(1.67)				(0.74)
Low	212	10	7	0.00	246	14	11	1.03
Medium	1077	10	9	2.05*	219	11	10	0.42
High	653	5	7	-0.88	21	10	11	0.33
NA	722	6	6	-1.24	655	7	8	-1.26
Residence[a]				(1.38)				(1.23)
NE Central City	178	4	4	-1.85*	98	8	8	-0.39
NE Other	452	6	6	-1.00	51	8	7	-0.48
NC Central City	207	6	7	-0.22	176	14	13	1.93*
NC Other	601	9	9	1.35	22	9	8	-0.26
South Urban	360	6	6	-0.96	368	9	10	0.21
South Rural	444	8	8	0.39	373	8	8	-0.73
West	404	9	9	1.42	51	4	4	-1.27
NA					2	c	c	c
Health Problem				(7.60)##				(0.82)
No	2346	8	8	2.74**	1054	10	10	0.89
Yes	300	4	4	-2.74**	87	6	7	-0.89

(Table continued on next page)

Table 6

Continued

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
KOWW[d]				(0.79)				(1.64)
Low	608	9	8	0.71	697	9	10	0.87
Medium	1121	7	7	-1.31	330	11	9	0.13
High	862	8	8	0.81	89	6	3	-2.00*
NA	55	5	5	-0.59	25	8	11	0.27
SES				(0.54)				(0.61)
Low	453	9	8	0.76	574	9	10	1.05
Medium	967	8	8	0.53	336	10	8	-1.05
High	1146	6	7	-0.94	85	7	8	-0.40
NA	80	6	6	-0.39	146	10	9	0.09
Total or average	2646				1141			
Grand mean			7				9	
$\hat{R}^2$			.03				.05	
F-ratio			4.05				3.61	

Universe: Respondents 21-27 years old in 1973 who were not discharged from the armed forces prior to the 1966 interview.

[a] The characteristic is measured as of the year of draft eligibility.

[b] Adjusted by multiple regression technique of holding constant all other variables shown in the table.
[c] Percentage not shown when the category contains less than 20 respondents.
[d] KOWW stands for "knowledge of the world of work".

# Statistically significant at the .05 level.
## Statistically significant at the .01 level.
* Category is significantly different from the grand mean at the .05 level.
** Category is significantly different from the grand mean at the .01 level.

draft pressure led to an increased likelihood of being drafted. Even though the education and mental ability measures by themselves were not significant, categories within these variables achieved statistical significance. Unlike the findings for enlistment, only 4 percent of the college graduates were drafted, a rate which was significantly below average. This suggests that given the alternative of enlisting or taking a chance with the draft white college graduates enlisted. It should be noted that many college graduates entered through ROTC and made the decision to enlist when they entered college. Consistent with hypothesis, white high school graduates were drafted at higher than average rates. Conscription was evenly distributed among regions of the United States with one exception, that being Northeastern central cities. Furthermore, there were no differences by social class.

There are only a few factors which are found to be negatively related to the likelihood of being drafted, namely; (1) health limitations, (2) children, (3) nondraft eligibility during the peak of the Vietnam War, (4) college graduation, and (5) Northeastern central city residence. The first three variables (health, dependents and draft pressure) correspond to institutional and environmental factors. As was noted in Chapter Two the Selective Service system saw itself as an "emergency" agency. One of its organizational objectives was to fill military manpower demands with qualified "healthy" men. Hence, the strength of the health variable is expected and meets policy objectives. The impact of the intensifying war, as measured through the draft pressure variables, is consistent with the "emergency" objective. In addition the power of the fatherhood deferment suggests that the presence of dependents effectively kept "healthy" men from being drafted. On the other hand, the negative relationship between completing college and the likelihood of being drafted implies that the student deferment was used by college graduates to avoid conscription. It is not at all clear why men from Northeastern central cities were drafted at such low levels.

Under conditions of "equity", socioeconomic status would be unrelated to conscription. There is little variation in the proportion drafted by SES level in either the adjusted or unadjusted figures. This implies that to some degree the equity objective was met, at least among whites.

Surprisingly, when the ineligibles are excluded from analyses, whites with reported health limitations continue to be drafted in significantly lower numbers. The possible solution to this paradox is the 1-Y deferment. Perhaps respondents with reported health limitations were able to extend their temporary deferments until they became a de facto exemption.

The Determinants of Being Drafted Among Blacks

Educational attainment, the hardship deferment and draft pressure are the strongest predictors among blacks. Unlike enlistment, where black fathers volunteered at average rates, the hardship deferment was used to avoid the draft. Much of the burden of the draft fell on high school graduates, who were drafted at disproportionate levels. Further, a high school graduate was twice as likely as a high school dropout and over six times as likely as respondents with 0-8 years of school to be drafted. Even when the 4-F's are excluded black high school dropouts continued to be drafted at disproportionately low levels i.e., 14 percent for high school graduates versus 8 percent for high school dropouts and 4 percent for those with 0-8 years of education. Blacks with some college were drafted at rates not significantly different from average.

Surprisingly, health limitations do not affect the likelihood of being drafted. This suggests a large discrepancy between a black youth's perceived health limitation and the armed forces health standards. On the other hand, one could speculate that blacks with marginal health problems do not bring these problems to the attention of the armed forces physician (during the pre-induction physical) under the assumption that their health problem would not be sufficient to disqualify them from the armed forces. Still another explanation could stem from discriminatory practices during the pre-induction physical examination.

Contrary to hypothesis, social class background was not related to conscription. Thus, among blacks, this finding suggests that to some extent the social class equity objectives were met. In addition, overall the "knowledge of the world of work" variable was not a significant predictor. However, blacks with high scores on this variable were drafted at rates significantly below average. Hence, black youth who have a thorough understanding of the range of civilian occupations potentially available, their rewards and entrance requirements are drafted at lower than average rates. It should be noted that this finding does not imply that these young men did not serve, rather that they avoided the draft through either enlistment or the many deferment avenues.

The Determinants of the Draft: Summary of the Findings

On the whole there are few racial differences in the significance of the factors postulated to affect conscription. Both the hardship deferment and draft pressure variables were significantly related to the likelihood of being drafted for both racial groups. In addition, there was similarity between blacks and whites in the factors that did not predict conscription--mental ability, socioeconomic status, and residence status.

Educational attainment and health are the only measures which have differential impact by race (as measured through the F-ratios associated with the contribution of each variable). Education is significantly (at the .01 level) related to the probability of a black being drafted but not to the likelihood of a white being drafted. Nevertheless, there are noteworthy racial differences in the rate of conscription within education categories.

Both white and black high school graduates were drafted at disproportionately high rates. In contrast, conscription of whites with 0 to 8 years of school was three times higher than among similar blacks (6 percent of the whites versus 2 percent of the blacks). On the other hand, draft rates of white and black high school dropouts are within two percentage points of one another. However, since blacks were drafted at higher rates than whites, conscription rates among black high school dropouts remain significantly below average black draft rates. Low draft rates among blacks who had not completed high school probably stemmed from their disproportionate failure to meet the armed forces minimum requirements. Examination of the results where men classified 4-F were excluded gave limited support to this argument. However, even when the ineligibles were excluded black high school dropouts and those who had failed to complete their primary education continued to be drafted at disproportionately low levels. Further, results from the "eligible" universe reveal that black high school graduates served at disproportionately high levels, while eligible white graduates served at rates not significantly different than average. Hence, the evidence suggests that a disproportionate burden of the draft fell on black high school graduates. On the other hand, among whites the burden of the draft was shared more evenly (with the exception of college graduates) between educational levels.

While white college graduates were drafted at disproportionately low levels, black college graduates, were drafted at average rates. It will be recalled that the reverse pattern prevails with the case of enlistment, i.e., blacks enlisted at significantly lower rates while whites enlisted at average rates. These findings may imply that white college graduates enlisted to avoid the draft. A white college graduate who enlists, often does so with the knowledge that he will become an officer. However, black college graduates may not perceive life as an officer as either a realistic or desired alternative.[8]

The findings relating to the health status variable are also interesting. Health is a powerful predictor among whites but is not correlated with black conscription. This suggests that whites, unlike blacks, were somehow able to use the health deferment to avoid service. It is difficult to characterize this phenomenon as discrimination. Rather, blacks seemed to be at a "disadvantage" in their ability to deal with the complicated, predominantly white medical "system". Whites on average are more likely to be treated by family physicians. Their medical histories may have been more complete. Perhaps more important, a white youth was more likely to know of others who successfully used the health deferment to avoid service. Whites were then able to use this knowledge in obtaining their own health deferment.

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[8] During the Vietnam era only a tiny fraction of the officers were black. Moskos reported that in 1965 "the ratio of Negro to white officers is roughly 1 to 26 in the Army, 1 to 60 in the Air Force and 1 to 300 in the Navy and Marine Corps." Moskos (1969, p. 142).

Although region and urbanicity of residence failed to achieve statistical significance for either racial group it is interesting to note that black conscription rates in the Northern central cities were approximately twice those for similar whites. The case is most dramatic when ineligibles are excluded from the analyses. In the Northeastern central cities 4 percent of the whites were drafted as compared with 11 percent of their black counterparts. In the North Central regions 14 percent of the black central city residents were drafted versus 8 percent of the similar whites.

The Likelihood of Serving: MCA Results and Interpretations

Introduction

As was discussed earlier, approximately 28 percent of the young men in the sample actually served in the armed forces during the Vietnam era (see Table 7). The findings of the model designed to identify the determinants of service during the Vietnam era parallel the results discussed in the sections on enlistment and the draft. However, the explanatory power as measured by the adjusted R^2 suggests that the model does a better job of accounting

Table 7

The Likelihood of Serving in the Armed Forces during the Vietnam Era: MCA Results

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Education[a]				(7.48)##				(8.02)##
0-8	123	18	20	-2.03*	150	9	15	-3.38**
9-11	373	27	24	-1.73*	321	25	26	-0.85
12	1054	36	34	4.80**	459	36	36	5.38**
13-15	586	30	26	-1.76*	150	28	22	-1.58
16	374	16	25	-1.37	51	14	15	-1.99*
17+	136	12	25	-0.91	10	c	c	c
Dependents[a]				(18.43)##				(4.55)#
None	2483	30	29	4.20**	1017	29	28	2.08*
Some	163	7	15	-4.20**	124	15	20	-2.08*
Draft Pressure[a]				(214.05)##				(45.56)##
High	956	45	44	13.48**	461	38	37	6.39**
Low	1690	19	20	-13.48**	680	20	21	-6.38**
IQ				(5.74)##				(6.86)##
Low	212	31	26	-0.92	246	33	29	0.72
Medium	1077	34	31	2.88**	219	39	37	3.31**
High	635	26	30	0.89	21	43	41	1.51
NA	722	22	24	-3.25**	655	21	23	-3.50**
Residence[a]				(2.81)##				(2.88)##
NE Central City	178	26	27	-0.40	98	26	27	-0.04
NE Other	452	27	29	0.27	51	20	19	-1.42
NC Central City	207	22	28	-0.11	176	32	30	0.79
NC Other	601	31	31	1.45	22	32	25	-0.29
South Urban	360	31	31	1.56	368	32	32	2.32*
South Rural	444	27	22	-3.24**	373	24	25	-1.14
West	404	29	30	0.79	51	10	13	-2.47**
NA					2	c	c	c
Health Problem[a]				(80.85)##				(8.85)##
No	2346	31	31	8.90**	1054	29	28	2.91**
Yes	300	8	9	-8.90**	87	10	15	-2.91**

(Table continued on next page)

Table 7

Continued

	WHITES				BLACKS			
Characteristic	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Potential Wage[a]				(23.81)##				(8.85)##
Low $0-$1.80	263	30	39	3.38**	380	25	30	0.84
Med $1.81-$2.50	1598	34	32	3.97**	463	32	28	0.53
High $2.51+	653	13	16	-5.66**	132	23	18	-2.07*
NA	132	24	28	-0.04	166	24	26	-0.12
Unemployment[a]				(44.76)##				(15.37)##
Less than 10 weeks of work experience	104	29	26	-0.72	88	20	21	-1.53
Low	1272	26	23	-6.25**	491	23	22	-3.69**
Medium	415	20	20	-4.42**	232	28	26	-0.69
High	166	17	19	-3.02**	105	18	21	-1.72*
NA	689	41	46	12.02**	222	43	46	7.14**
SES				(0.07)				(0.23)
Low	453	28	28	-0.10	574	26	28	0.44
Medium	967	31	29	0.45	336	31	27	-0.06
High	1146	27	28	-0.30	85	26	26	-0.33
NA	80	24	28	-0.03	146	25	25	-0.22
Total or average	2645				1141			
Grand mean			28				27	
R^2			.19				.14	
F-ratio			23.88				7.90	

Universe: Respondents 21-27 years old in 1973 who were not discharged from the Armed Forces prior to the 1966 interview.

[a] The characteristic is measured as of the year of draft eligibility.

[b] Adjusted by multiple regression technique of holding constant all other variables shown in the table.

[c] Percentage not shown when the category contains less than 20 respondents.

# Statistically significant at the .05 level.
## Statistically significant at the .01 level.
* Category is significantly different from the grand mean at the .05 level.
** Category is significantly different from the grand mean at the .01 level.

for variation in the likelihood of serving than for either the draft or enlistment question.[9]

The Determinants of Service Among Whites

The results suggest that draft policy and the Selective Service deferment/exemption classification system played a key role in predicting participation in the armed forces (see Table 7). Low draft pressure, health problems and/or the presence of children significantly reduced the likelihood of serving. Draft pressure was one of the most powerful predictors; whites who were draft eligible between 1966 and 1968 served at twice the rate of whites who were eligible during other conflict years (44 percent who were draft eligible during periods of high draft calls entered versus 20 percent for those who were eligible during low draft call periods).

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[9] Method of entry (draft or enlistment) is not directly ascertainable for individuals who were discharged after 1971. When the method of entry was not known a proxy for the draft and enlistment measures was devised. An individual was coded "1" on the draft dependent variable if he served between 18 and 24 months. Likewise, an individual was coded "1" on the enlistment measure if he served more than 25 months. However, the only criterion used for an individual to be coded "1" on the likelihood of service measure was a duration of service of six months or more. Hence, if information on entry method was unknown and the duration of service was between six and 17 months an individual was coded "1" on the service measure but "0" on both the enlistment and draft dependent measure. In summary, the individuals who served but did not meet the criterion to be classified as either enlistees or draftees were those who were discharged after 1971 and served less than 18 or exactly 25 months. This does not affect the "who serves" equation.

Education and mental ability were also significantly related to service. As hypothesized, young men with average ability and 12 years of education served at disproportionately high levels. Individuals with less than a high school degree served at significant, disproportionately low rates. It will be recalled that enlistment among white high school dropouts was significantly below average, while the draft was at average rates. The low propensity to enlist dominated and led to the net negative association between the likelihood of service and the failure to complete high school. College dropouts also served at disproportionately low levels. This is contrary to the hypothesized relationship that college dropouts would serve at rates higher than average. Many young men entered college to avoid the draft. Indeed, Johnston and Bachman report that "20 percent of the college youth mentioned avoiding the draft among their three most important reasons for entering college".[10] If a young college student learned that he was eligible for a different type of deferment such as conscientious objector, health, or hardship, the rationale for remaining in college would have diminished.[11] Hence a significant portion of the college dropouts may have left college with the knowledge that they had secured a deferment and would not enter the armed forces. Unlike college dropouts, college graduates and those with postgraduate training entered at rates not significantly different from average. Their lower likelihood of being drafted was offset by their greater likelihood of enlistment.

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[10] Johnston and Bachman (1972, p. 111).

[11] A very high lottery number which virtually guaranteed draft exemption would have had a similar impact.

The region and urbanicity variable was also significantly related to service. However, military service was distributed evenly throughout the country with the exception of the rural South. The reason for the below average rates of service among rural Southerners probably lies in the combined impact of the agricultural deferment and the ability exemption.

Potential wage exhibited the hypothesized inverse relationship with the likelihood of service. Among the respondents with a low potential wage 39 percent entered the armed forces, while only 16 percent of those with the potential for high civilian earnings served. It is somewhat surprising that the potential wage variable performed so well, since the draft would tend to reduce the impact of civilian earnings on the likelihood of service.

Contrary to popular belief and our hypothesis social class was not a significant predictor of military service. This relationship is observed in both the gross and adjusted percentage. Hence, it seems reasonable to assert that in the last analysis, there was an equitable distribution of the ex-ante burden of military service among whites along the dimension of social class. This finding is probably due to military manpower policies of the late 1960's such as increased manpower calls, Project 100,000, and the end of the student deferment.

Finally, as was true in the enlistment and draft models, even when the ineligible are excluded from analysis whites with self-reported health limitations served at disproportionately low levels. Hence, whites were generally able to use health problems (even marginal ones) to avoid service.

The Determinants of Service Among Blacks

As hypothesized, Selective Service, draft pressure, environmental and economic variables are all significantly associated with the likelihood of a black youth serving in the armed forces during the Vietnam era. As was noted earlier, black individuals with self-reported health problems were drafted at average rates. In addition, fathers enlisted at rates not different from those of men without the responsibility of dependents. However, both the health and dependent variables performed as anticipated in the likelihood of service model.

As hypothesized, draft pressure was a strong predictor. A black who was drafted eligible during the peak war years was almost twice as likely to serve as an individual who was liable during other conflict years.

Education was a strong predictor. However, the armed forces drew most heavily upon blacks in the middle educational categories (9 to 11, 12, or 13 to 15 years of school completed), expecially high school graduates. To illustrate this point, high school graduates served at rates over twice those of both college graduates and individuals who had not completed their primary education (36 percent for high school graduates versus 15 percent for both college graduates and individuals with 0-8 years of school). High school and college dropouts served at rates not significantly different from average.

Mental ability was also significantly associated with the likelihood of service. However, IQ obtains most of its explanatory power from the strong positive relationship between military service and an average level of mental ability.

Like the enlistment model, the region and urbanicity variable was significantly related to the likelihood of service. However, unlike the case of enlistment, where every category was significantly different from the mean, only residents of the urban South amd the West served at rates significantly different from the average. Residents of the urban South enlisted at disproportionate levels and were drafted at average rates. The military's traditional appeal in the South coupled with the higher levels of racial discrimination in this region probably accounted for this finding. On the other hand, it is difficult to understand why Western blacks served at less than half the average rate for blacks.

Surprisingly, unlike the model designed to explore enlistment, where the potential wage variable was not significant, the likelihood of service is significantly related to civilian wage. However, only the high wage category is significantly different from the mean. Men with high potential wages, on the other hand, enlisted at a rate not significantly different than the average. The key to this puzzle probably lies with a relationship between civilian earnings and the likelihood of a black being drafted. Blacks with high values on the potential wage measure were most likely to have the ability and health to make it in the civilian sector. They were also most likely to be "qualified" to serve. Given the high propensity for a qualified black to be drafted, it is possible that many blacks with high potential wages perceived a disproportionately high probability of being drafted and enlisted to avoid the draft. Hence, the negative relationship between entering the armed forces and civilian earnings was evident only when looking at the overall picture.

Socioeconomic status was the only variable found to be unrelated to the likelihood of service for blacks. Hence, a degree of equity between the social classes was achieved.

The Determinants of Service: Summary of the Findings

All variables which were significantly related to the likelihood of service for whites also achieved significance for blacks.

The few racial differences that exist were found within categories of specific independent variables.

The findings suggest that the responsibility of service fell most heavily on high school graduates and those who were average in terms of measured mental ability. Indeed, black and white high school graduates entered at almost identical rates (34 percent of the whites versus 36 percent of the blacks). Furthermore, the entrance rates of black and white high school graduates were closer to each other than to non-high school graduates of their own race.

In addition, the presence of children or a health problem also reduced the likelihood of service. When the ineligibles were excluded from analyses a surprising racial difference is uncovered. As hypothesized, reported health problems had little impact on eligible black service rates. Eligible whites with health problems, on the other hand, entered at significantly lower rates. This implies that whites were better able than blacks to use marginal health limitations as an avenue to escape the draft. The findings for blacks suggest either that: (1) there was a lack of correspondence between perceived health problems and the armed forces requirements; or (2) blacks with marginal health problems were at a disadvantage, compared to whites, in their attempts to convert health limitations into a deferment. This implies either discriminatory practices on the part of the armed forces or that blacks were less aware of the potential avenues available in securing a health deferment.

As anticipated, the peak years of military demand siphoned young men into the armed forces at disproportionate rates. During the Vietnam era, Congress made many changes to the draft laws in order to insure equity within the system. However, the demand for men brought about by the war itself may have been the single most powerful factors in achieving this goal.

Rates of entrance between the races are fairly uniform throughout the country, with the exception of the West. Only 13 percent of the Western blacks entered compared to 30 percent of the whites. For both racial groups, residents of the urban South entered at higher rates than those of the rural South. The lower rate of entrance among rural blacks probably stemmed from the ability exemption. Fully 22 percent of the blacks from the rural South were not eligible to serve. This compares to 10 percent of the whites. Furthermore, when the ineligibles are excluded from analysis the rate of entrance among rural Southern blacks jumped from 25 to 29 percent. The increase in white entrants rose only one percent (from 22 to 23 percent). Whites probably were more likely to take advantage of the agricultural deferment. Hence, it seems there were different reasons for similar participation rates between Southern blacks and whites.

Potential wage was significant for both racial groups. However, only blacks with a high potential wage served at disproportionately low levels. Whites, on the other hand, exhibited the hypothesized inverse relationship among all wage categories. Since civilian wage was unrelated to enlistment among blacks it seems likely that blacks who could expect relatively high wages in the civilian sector may have enlisted to avoid the draft. On the other hand, similar whites enlisted at significantly below average rate. Perhaps whites were better able to obtain a deferment or exemption and thus to remain in the civilian sector. It is possible that among whites, a high potential wage was somehow a proxy for an occupational deferment.

Socioeconomic status was the only variable which did not achieve statistical significance. This was true of both racial groups. Neither the unadjusted nor adjusted percentages revealed differences in the rate of service by individuals from different social classes. These findings imply that a degree of social class equality was achieved in the military recruitment process during the Vietnam era.

Conclusion

The major findings of the preceding sections are summarized in Tables 8 through 10. Draft pressure alone performed as hypothesized and was a significant predictor regardless of method of entry, eligibility status, or race. Clearly, service in the armed forces during the Vietnam era was a function of the unpredictable nature of American foreign policy, and the fortunes of war. Other Selective Service or institutional variables such as health limitations or parenthood were consistently, negatively related to all three dependent measures for whites only. On the other hand, black fathers were as likely to enlist as non-fathers and blacks with self-reported health limitations were drafted at average rates.

The health variable revealed some puzzling findings. When ineligibles are excluded from analysis, whites with self-reported health limitations entered, were drafted and enlisted at rates significantly below average. Blacks, alternatively, enlisted, were drafted and entered the armed forces at average rates. This coupled with the finding that blacks with health limitations were drafted at average rates, is one of the major racial differences uncovered in this study. These findings suggest that whites were better able than blacks to convert marginal health limitations into deferments which became de facto exemptions. This implies either a large discrepancy between a black youth's perceived health limitation and the armed forces health standards or that blacks with marginal health problems were at a disadvantage in obtaining temporary health deferments compared to similar whites.

When looking at the equity dimension it seems that the burden of the war was placed most heavily on the "average" in terms of educational attainment and mental ability. Socioeconomic status failed to achieve statistical significance for whites. It is related to enlistment for blacks; however, this finding leads to

Table 8

The Likelihood of Enlisting: A Comparison of the Hypothesized Relationships with the Empirical Results

Explanatory[a] Variables	The Probability of Enlisting							
	Whites				Blacks			
	Total		Eligible		Total		Eligible	
	Hypothesis	Empirical	Hypothesis	Empirical	Hypothesis	Empirical	Hypothesis	Empirical
Draft Pressure								
High	(+)	+	(+)	+	(+)	+	(+)	+
Health Problems								
Yes	(-)	-	(-)	-	(-)	-	(-)	0
Dependents								
Some	(-)	-	(-)	-	(-)	0	(-)	0
Education								
0-8	(-)	0	(-)	0	(-)	-	(-)	-
9-11	(+)	-	(+)	-	(+)	0	(+)	0
12	(+)	+	(+)	+	(+)	+	(+)	+
13-15	(+)	-	(+)	0	(+)	+	(+)	0
16	(-)	0	(-)	0	(-)	-	(-)	-
17+	(-)	0	(-)	0	(-)	b	(-)	b
Potential Wage								
Low	(+)	+	(+)	+	(+)	0	(+)	0
Medium	(0)	+	(0)	+	(0)	0	(0)	0
High	(-)	-	(-)	-	(-)	0	(-)	0
Ability								
Low	(-)	0	(-)	0	(+)	0	(+)	0
Medium	(+)	+	(+)	0	(+)	+	(+)	+
High	(-)	0	(-)	0	(-)	+	(-)	+
Socioeconomic Status						d		d
Low	(-)	0	(-)	0	(+)	0	(+)	0
Medium	(+)	0	(+)	0	(+)	0	(+)	0
High	(-)	0	(-)	0	(-)	0	(-)	0
Residence		c						
NE Central City	(-)	0	(-)	0	(-)	-	(-)	-
NE Other	(-)	0	(-)	0	(-)	-	(-)	-
NC Central City	(0)	0	(0)	0	(0)	-	(0)	-
NC Other	(0)	0	(0)	0	(0)	-	(0)	-
South Urban	(+)	+	(+)	+	(+)	+	(+)	+
South Rural	(-)	-	(-)	-	(-)	+	(-)	+
West	(0)	0	(0)	0	(0)	-	(0)	-

(Table continued on next page)

Table 8

Continued

Key: (+) signifies an hypothesized positive relationship between this category of the explanatory variable and the likelihood of a young man enlisting.

(-) signifies an hypothesized negative relationship between this category of the explanatory variable and the likelihood of a young man enlisting.

(0) signifies no hypothesized relationship between this category of the explanatory variable and the likelihood of a young man enlisting.

+ signifies a significant, observed positive relationship between this category of the explanatory variable and the likelihood of a young man enlisting.

- signifies a significant, observed negative relationship between this category of the explanatory variable and the likelihood of a young man enlisting.

0 signifies no significant observed relationship between this category of the independent variable and dependent measure.

[a] The unemployment measure is not shown because the high correlation between the MA's on that variable and the dependent measure make the results questionable.

[b] The relationship is not reported when less than 20 sample cases.

[c] The F-ratio for the variable taken as a whole was not statistically significant.

[d] The F-ratio for the variable taken as a whole was statistically significant.

Table 9

The Likelihood of being Drafted: A Comparison of the Hypothesized Relationships with the Empirical Results

Explanatory[a] Variables	The Probability of being Drafted							
	Whites				Blacks			
	Total		Eligible		Total		Eligible	
	Hypothesis	Empirical	Hypothesis	Empirical	Hypothesis	Empirical	Hypothesis	Empirical
Draft Pressure								
High	(+)	+	(+)	+	(+)	+	(+)	+
Health Problems								
Yes	(-)	+	(0)	+	(-)	0	(0)	0
Dependents								
Some	(-)	-	(-)	-	(-)	-	(-)	-
Education		[a]		[a]				
0-8	(-)	0	(-)	0	(-)	-	(-)	-
9-11	(+)	0	(+)	0	(+)	-	(+)	-
12	(+)	+	(+)	0	(+)	+	(+)	+
13-15	(+)	0	(+)	0	(+)	0	(+)	0
16	(-)	-	(-)	-	(-)	0	(-)	0
17+	(-)	0	(-)	0	(-)	b	(-)	b
Ability		[a]		[a]				
Low	(-)	0	(+)	0	(-)	0	(+)	0
Medium	(+)	+	(+)	+	(+)	0	(+)	0
High	(-)	0	(-)	0	(-)	0	(-)	0
Socioeconomic Status								
Low	(-)	0	(+)	0	(-)	0	(+)	0
Medium	(+)	0	(+)	0	(+)	0	(+)	0
High	(-)	0	(-)	0	(-)	0	(-)	0
KOWW[c]						[a]		[a]
Low	(+)	0	(+)	0	(+)	0	(+)	0
Medium	(0)	0	(0)	0	(0)	0	(0)	0
High	(-)	0	(-)	0	(-)	-	(-)	-
Residence		[a]				[a]		[a]
NE Central City	(0)	-	(0)	0	(+)	0	(+)	0
NE Other	(0)	0	(0)	0	(0)	0	(0)	0
NC Central City	(0)	0	(0)	0	(+)	+	(+)	+
NC Other	(0)	0	(0)	0	(0)	0	(0)	0
South Urban	(+)	0	(+)	0	(+)	0	(+)	0
South Rural	(-)	0	(-)	0	(-)	0	(-)	0
West	(0)	0	(0)	0	(0)	0	(0)	0

(Table continued on next page)

Table 9

Continued

Key: (+) signifies a hypothesized positive relationship between this category of the explanatory variable and the likelihood of being drafted.

(-) signifies a hypothesized negative relationship between this category of the explanatory variable and the likelihood of being drafted.

(0) signifies no hypothesized relationship between this category of the explanatory variable and the likelihood of being drafted.

+ signifies a significant,observed positive relationship between this category of the explanatory variable and the likelihood of being drafted.

- signifies a significant,observed negative relationship between this category of the explanatory variable and the likelihood of being drafted.

0 signifies no significant observed relationship between this category of the independent variable and dependent measure.

[a] The F-ratio for the variable taken as a whole was not statistically significant.

[b] The relationship was not reported when less than 20 sample cases.

[c] KOWW stands for "knowledge of the world of work".

TABLE 10

The Likelihood of Serving: A Comparison of the Hypothesized Relationships with the Empirical Results

Explanatory[a] Variables	The Probability of Serving							
	Whites				Blacks			
	Total		Eligible		Total		Eligible	
	Hypothesis	Empirical	Hypothesis	Empirical	Hypothesis	Empirical	Hypothesis	Empirical
Draft Pressure								
High	(+)	+	(+)	+	(+)	+	(+)	+
Health Problems								
Yes	(-)	-	(-)	-	(-)	-	(-)	0
Dependents								
Some	(-)	-	(-)	-	(-)	-	(-)	-
Education								
0-8	(-)	-	(-)	0	(-)	-	(-)	-
9-11	(+)	-	(+)	-	(+)	0	(+)	0
12	(+)	+	(+)	+	(+)	+	(+)	+
13-15	(+)	-	(+)	-	(+)	0	(+)	-
16	(-)	0	(-)	0	(-)	-	(-)	-
17+	(-)	0	(-)	0	(-)	b	(-)	b
Potential Wage								
Low	(+)	+	(+)	+	(+)	0	(+)	0
Medium	(0)	+	(0)	+	(0)	0	(0)	0
High	(-)	-	(-)	-	(-)	-	(-)	-
Ability								
Low	(-)	0	(+)	0	(-)	0	(+)	0
Medium	(+)	+	(+)	+	(+)	+	(+)	+
High	(-)	0	(-)	0	(-)	0	(-)	0
Socioeconomic Status								
Low	(-)	0	(+)	0	(-)	0	(+)	0
Medium	(+)	0	(+)	0	(+)	0	(+)	0
High	(-)	0	(-)	0	(-)	0	(-)	0
Residence								
NE Central City	(-)	0	(-)	0	(-)	0	(-)	0
NE Other	(-)	0	(-)	0	(-)	0	(-)	0
NC Central City	(0)	0	(0)	0	(0)	0	(0)	0
NC Other	(0)	0	(0)	0	(0)	0	(0)	0
South Urban	(+)	0	(+)	0	(+)	+	(+)	+
South Rural	(-)	-	(-)	-	(-)	0	(-)	0
West	(0)	0	(0)	0	(0)	-	(0)	-

(Table continued on next page)

TABLE 10

Continued

Key: (+) signifies an hypothesized positive relationship between this category of the explanatory variable and the likelihood of a young man serving in the armed forces.

(-) signifies an hypothesized negative relationship between this category of the explanatory variable and the likelihood of a young man serving in the armed forces.

(0) signifies no hypothesized relationship between this category of the explanatory variable and the likelihood of a young man serving in the armed forces.

+ signifies a significant, observed positive relationship between this category of the explanatory variable and the likelihood of a young man serving in the armed forces.

- signifies a significant, observed negative relationship between this category of the explanatory variable and the likelihood of a young man serving in the armed forces.

0 signifies no significant observed relationship between this category of the independent variable and dependent measure.

[a] The unemployment measure is not shown because the high correlation between the NA's on that variable and the dependent measure make the results questionable.

[b] The relationship is not reported when less than 20 sample cases.

the conclusion that some blacks in the lower SES levels enlisted to avoid or escape (at least temporarily) civilian labor market conditions. These findings suggest that overall, controlling for education and ability, a degree of social class equity was achieved. In addition, compared to enlistment and the likelihood of service the draft seemed to have a random component. The adjusted R^2's are much lower and fewer variables are significant. It does seem that to some degree the "risk" of induction was random.

For whites potential wage was significantly and inversely related to both enlistment and the likelihood of service. While it is not surprising that civilian wages are related to enlistment, it is an especially noteworthy finding that even in the presence of the draft whites respond to wages as an incentive (or disincentive) to enter the armed forces. Potential wage was not related to enlistment among blacks. However, there was a negative relationship between high civilian wages and the likelihood of service. Hence, blacks with a high potential earnings enlisted at average rates but entered at below average rates. This suggests that these men enlisted to avoid the draft. Young men who have the potential to do well in the labor market are also the ones who are most "qualified" to fulfill military needs. Given the high propensity for a "qualified" black to be drafted, the men whose potential in the civilian sector was high may have enlisted to avoid the consequences of the draft.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

This study is a comprehensive investigation of the military recruitment process during the Vietnam era. Using data from a national sample of young men we focused on three related questions: first, who served; secondly, who was drafted; and finally, who chose to enlist. This chapter discusses the major findings and (where relevant) assesses them from an equity standpoint. In addition, the methodological contributions, policy implications and directions for future research are discussed.

Institutional Factors

For the most part, the dependents measure performed as hypothesized. Fathers served at rates significantly below average. The one exception was enlistment among blacks. Black fathers volunteered at a rate not significantly different from that for non-fathers. Hence, blacks did use their hardship deferment to avoid the negative factors associated with the draft. However, the benefits of enlistment (e.g., steady work, training) were enough to make the armed forces a substitute for the civilian sector.

The health measure revealed some interesting racial differences. Whites with poor health served at below average rates regardless of entry method or eligibility status. Blacks with reported health limitations, on the other hand, were drafted at rates not significantly different than average. In addition, unlike whites, when those ineligible for service are excluded from analysis, blacks with reported health limitations served at average rates. These findings suggest that, in the actual implementation of the health deferment policy whites and blacks were treated differently.[1]

The hardship deferment was not designed to bar fathers from service. Rather its purpose was to free them from the liability of the draft. Evaluation of the hardship deferment leads one to the conclusion that it was neutral with respect to equity. The health measure revealed quite a different picture. Blacks seemed to have been at a disadvantage compared to whites in converting their health limitations into de facto exemptions. This difference may be attributed to discriminatory practices during the pre-induction physical. Alternatively, whites may have been more successful at pursuing the many avenues which lead to a deferment. Whatever the reason, however, the empirical results suggest that racial inequalities in implementation of the health deferment existed.

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[1] It should be noted that the health variable relies on the respondent's subjective perceptions of his own health problems. Hence, the validity of the conclusions reached here is subject to the reliability of the respondent's subjective perceptions.

Education and Socioeconomic Status

The empirical results of the present study revealed that, overall, those with no more than eight years of formal education were least likely to serve while high school graduates participated and enlisted at the highest rates.[2] Black high school graduates were drafted at disproportionately high rates; however, this was not the case for whites. Hence, the many manpower recruitment policies of the Vietnam era--those which deferred the highly educated and exempted men with low ability--tended to place a disproportionate burden of military service on high school graduates. Furthermore, a relatively greater "risk" of induction fell upon black high school graduates.

Regardless of race or eligibility status, social class background failed to achieve significance in the likelihood of service or likelihood of being drafted models. This finding suggests that the military did not draw disproportionately from any one social class when fulfilling its manpower demands.

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[2] Even though high school graduates served in the greatest numbers, their rates of service were approximately half that of older cold war era high school graduates. Davis and Dolbeare (1968, p. 128) report that 74 percent of all high school graduates between the ages of 27 and 34 in 1966 had served. The results of Table 7 in Chapter Four show that 34 percent of the whites and 36 percent of the black high school graduates aged 21 to 29 in 1973 served.

Draft Pressure

Draft pressure proved to be the strongest single predictor.[3] Individuals who became draft eligible between 1966 and 1968 were twice as likely to serve as those who became eligible throughout the other Vietnam era years. During the years of heaviest fighting the eligibility standards were lowered and students were occasionally reclassified from 2-S to 1-A (in 1967 undergraduates were sometimes drafted out of school; class rank was used as the draft criterion). These were also the years when men were called in the greatest numbers. Hence, the manpower needs of an intensifying war may have been the single most important factor in negating some of the earlier inequitable draft policies.

Civilian Wages

The impact of wages on enlistment is of special policy concern. Today the armed forces rely solely upon volunteers to meet their human resource needs. The chief mechanisms used by the military in competing with the civilian sector for manpower are the competitive wage and an extensive recruitment network which stresses training and other advantages of the armed forces. Previous research efforts that utilized aggregate data focused upon the impact of civilian-military earnings differentials on enlistment among whites.[4] In almost every instance, earnings differentials were found to be significantly related to voluntary entry into military service. Johnston and Bachman also explored the relationship between earnings and enlistment among whites. Unlike earlier studies they used panel data and controlled for sociological and psychological factors. However, the authors found no relationship between civilian wages and enlistment. The finding in the present study supports that of the Gates Commission. Civilian earnings are indeed a significant factor in predicting enlistment among whites. Furthermore, wages are also significant in explaining the larger question of who serves.

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[3] It was the only variable which was significant regardless of entry method, race or eligibility status.

The present study is the first to explore the relationship between civilian earnings and black enlistment. The empirical results demonstrated that blacks responded differently from whites. Potential wage was not significantly related to enlistment among blacks. however, in the "who serves" equation potential wage was significant, although it obtained most of its explanatory power from the strong negative relationship between military service and high values on that variable. Hence, blacks who had high potential civilian earnings enlisted at average rates but entered at below average rates. This implies draft avoidance behavior by those with relatively high potential wages. Certainly, blacks with a high potential for labor market success (as measured by wages) would be most likely to meet the armed forces minimum standards. Given the very real threat of the draft for these men it is possible that they enlisted at average rates to avoid the draft. It should be noted that the hypothesized positive relationship between low potential wages and the likelihood of serving or enlisting were not confirmed. Perhaps blacks with low potential wages may have been influenced by the war and perceived that during the Vietnam era joining the armed forces was synonymous with carrying a gun in Southeast Asia.

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[4] For example see Altman (1969), Altman and Fechter (1967), Fisher (1969), and Gray (1970).

Methodological Contribution

In this study two different methods were used to test hypotheses: multiple classification analysis (MCA) and logit. Statistical problems with the use of dichotomous dependent variables in regression analysis (MCA is a special form of regression) necessitated using logit to confirm the MCA results. Logit and MCA results are not directly comparable. A technique was developed which transformed the coefficients generated by MCA and logit (see Appendix C). A comparison of the transformed results revealed that the predicted direction and magnitude of the logit and MCA coefficients were, with few exceptions, similar. More importantly, differences between the two methods did not change the interpretation of the results.

Policy Implications

The findings of this study have at least four major implications for those responsible for meeting our nation's military manpower needs. In the first place this study confirms the effectiveness of wages as a useful incentive in attracting whites into the armed forces. Moreover, wages proved to be a strong predictor even in the presence of the draft. Hence, the all-volunteer armed service rests upon a firm foundation in its attempts to recruit whites. Secondly, the findings suggest that the strategy used to recruit blacks should place special emphasis on factors other than wages. Several results reported above (the positive association between enlistment and residence in the South and low levels of socioeconomic status and the non significance of potential wage) suggest that "self-advancement" is one of the major motives of black enlistment. Hence, the recruitment policies for blacks should emphasize the multitude of training and career development opportunities that are available through the armed forces.

Although we currently are and will continue to be at peace the possibility of another limited war such as Vietnam exists. The results of this research effort are useful in such a context. The combined influence of the draft pressure and potential wage variables lead to the third policy implication of this study. In a limited-war context, a mixed volunteer-lottery system coupled with minimum health and ability standards would be an equitable and effective method of meeting the manpower needs of the armed forces. Furthermore, it would be superior to selective service as a procurement policy. A mixed volunteer-lottery system would have the advantage of spreading the "risk" of the draft evenly. In addition, enlistments would be motivated both through wages and draft pressure. Fourth, the findings of this study suggest that in the event of another draft, special care should be taken to insure equity in the implementation of minimum health standards.

Directions for Future Research

Future research efforts could go in at least three directions. First, there are several types of data used in the present study which could be improved; e.g., the health, ability, unemployment and wage measures. The health measure is based on the respondents' reported subjective health condition. The impact of health could be better assessed by using the respondents' objective health condition. Doing this would eliminate the possibility that racial differences merely reflected racial differences in subjective judgments concerning the definition of a work or school-limiting health problem. The NA category of the unemployment and ability measures in the present study are highly correlated with the probability of entering the armed forces. A standardized ability measure given to all respondents would be superior. In addition, a more refined measure of the duration of unemployment would be an improvement. Finally, a measure of civilian-military wage differentials would have the advantage of more accurately reflecting the concepts developed on the economic occupational choice models.

The present study is rather limited in scope, applying only to the Vietnam era. Hence, the second direction for future research addresses much broader dimensions of military manpower needs. A comparable study exploring the determinants of enlistment under the all-volunteer system would be useful. Such a study would enable comparison of the two methods of military manpower procurement. It would be interesting to compare the types of individuals who entered or volunteered during the Vietnam era with the enlistees of the all-volunteer military of today. In addition, an understanding of the differences and similarities in the factors that are significant in explaining enlistment would be beneficial in assessing how well the different methods of manpower procurement meet policy objectives.

Third, further theoretical work is needed which places enlistment in a more general theory of occupational choice or career development. Formal theories of occupational choice such as Holland's, Roe's, or Super's[5] explore occupational choice, implicitly assuming that the subject is in the civilian sector. When an individual enters the armed forces he is simultaneously choosing a different environment and an occupation within that environment; (e.g., electronic repairman, radio operator, pilot). Hence, a theory which combines the joint selection of sector (military or civilian) and occupation would be useful.

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[5] For further discussion of these theories see Osipow (1973).

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APPENDIX A

THE POTENTIAL WAGE EQUATION

Table 11 Regression Results for the Potential Wage Equation, by Race

(t-value)

Explanatory[c] variables	Dependent variable: WAGE[a,b]			
	WHITES		BLACKS	
EDUCATION[a]	13.47	(9.02)***	5.42	(2.11)**
TRAIN P/M[a]	26.10	(3.30)***	23.66	(1.55)*
TRAIN S/C[a]	31.13	(3.05)***	2.28	(0.14)
EXPERIENCE[a]	21.97	(3.59)***	10.12	(1.26)
TENURE[a]	0.33	(1.29)*	-0.06	(-0.15)
KOWW	1.17	(3.11)***	2.15	(3.62)***
HEALTH[a]	-4.69	(-0.65)	-16.16	(-1.18)
SES	-0.11	(-0.71)	0.22	(0.88)
SMSA[a]	19.11	(3.62)***	14.18	(1.44)*
SOUTH[a]	-25.16	(-4.44)***	-46.03	(-5.19)***
CONST.	-5.28	(0.23)	71.16	(2.16)**
$\bar{R}^2$	0.16		0.18	
F-ratio	25.37		11.99	
Number of respondents	1,283		500	
Dependent Vbl (Mean, std. dev.)	232.13	95.69	206.43	92.95

Universe: Males 21 to 27 years of age in 1973, who were not enrolled and employed in the year of draft eligibility.

[a] This variable was measured in the year of draft eligibility.

[b] Wage or hourly rate of pay was deflated to constant 1967 dollars.

[c] Definition of the variables: TRAINP/M--Training professional or managerial = 1; TRAINS/C--Training skilled manual or clerical = 1; EXPERIENCE--number of years since leaving school; TENURE--measured in months; KOWW--a test of occupational information; HEALTH--health problem limits school or work = 1; SES--an index of socio-economic status of parental family; SMSA--respondent lived in an SMSA = 1; SOUTH--respondent lived in the South = 1.

* Significant at the .10 level.
** Significant at the .05 level.
*** Significant at the .01 level.

APPENDIX B

ADDITIONAL RESULTS

Table 12 The Likelihood of a Non Exempted Young Man Enlisting in the Armed Forces during the Vietnam Era: MCA Results

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Education[a]				(6.34)##				(2.88)#
0-8	94	14	14	-1.08	95	8	10	-2.08*
9-11	322	16	14	-2.56*	253	17	19	0.41
12	996	25	24	4.27**	407	21	22	2.17*
13-15	562	20	17	-1.62	140	21	16	0.64
16	363	12	18	-0.59	48	10	7	-2.04*
17 +	130	5	14	-1.35	10	c	c	c
Dependents[a]				(10.22)##				(1.57)
none	2307	20	20	3.12**	845	20	19	1.21
some	160	4	10	-3.12**	108	11	14	-1.21
Draft Pressure[a]				(102.56)##				(8.00)##
high	870	30	30	9.27**	372	22	23	2.65**
low	1597	13	14	-9.27**	581	16	16	-2.65**
IQ				(2.42)				(5.87)##
low	175	23	19	-0.07	202	16	15	-1.40
medium	1018	22	21	1.52	202	25	25	2.43**
high	616	18	20	0.82	20	45	43	2.87**
NA	653	15	16	-2.31*	529	16	17	-1.64
Residence[a]				(2.33)#				(5.70)##
NE Central City	160	21	22	0.94	77	12	10	-1.96*
NE Other	431	19	21	0.96	46	9	7	-2.14*
NC Central City	193	13	18	-0.51	160	15	11	-2.20*
NC Other	574	20	20	0.32	21	5	1	-2.24*
South Urban	333	23	23	1.89*	311	25	25	3.22**
South Rural	399	18	14	-2.75**	291	20	23	1.95*
West	377	18	19	-0.21	45	4	5	-2.37**
NA					2	c	c	c
Health Problem[a]				(39.46)##				(2.91)
no	2217	21	21	6.21**	904	19	19	1.68
yes	250	4	5	-6.21**	49	6	10	-1.68

(Table continued on next page)

Table 12 continued

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Potential Wage[a]				(20.11)##				(2.49)
low 0-$1.80	228	21	28	2.87**	289	18	14	-1.51
medium $1.81-$2.50	1499	24	22	3.65**	406	22	20	0.81
high $2.51+	627	8	10	4.40**	126	14	19	0.07
NA	113	17	12	-1.18	132	14	23	0.51
Unemployment[a]				(23.04)##				(4.94)##
less than 10 weeks work experience	94	20	17	-0.65	68	13	13	-1.15
low	1188	17	15	-4.97**	385	16	15	-2.43**
medium	374	13	14	03.02**	191	19	18	-0.18
high	148	13	15	-1.55	88	14	16	-0.72
NA	663	28	31	8.63**	221	27	28	3.98**
SES				(1.82)				(3.52)#
low	397	19	18	-0.46	456	20	21	1.30
medium	900	20	18	-0.76	303	20	19	0.32
high	1095	19	20	-0.35	75	17	14	-0.90
NA	75	19	29	1.28	119	13	9	-0.96
Total or Average	2467				953			
Grand Mean			19				19	
$\hat{R}^2$			.12				.07	
F-ratio			13.01				3.54	

Universe: Mentally and physically eligible (not classified 4-F) respondents 21-27 years old in 1973 who were not discharged from the Armed Forces prior to 1966.

[a] The characteristic is measured as of the year of draft eligibility.

[b] Adjusted by multiple regression technique of holding constant all other variables shown in the table.

[c] Percentage not shown when the category contains less than 20 respondents.

# Statistically significant at the .05 level.
## Statistically significant at the .01 level.
* Category is significantly different from the grand mean at the .05 level.
** Category is significantly different from the grand mean at the .01 level.

Table 13 The Likelihood of a Non Exempted Young Man Being Drafted into the Armed Forces during the Vietnam Era: MCA Results

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Education[a]				(1.70)				(2.70)#
0-8	94	7	8	-0.09	95	3	4	-2.17**
9-11	322	10	9	0.79	253	9	8	-1.70*
12	996	10	9	1.50	407	15	14	2.22**
13-15	562	8	8	-0.13	140	10	12	0.68
16	363	2	4	-2.41**	48	2	7	-0.83
17+	130	4	8	-0.17	10	c	c	c
Dependents[a]				(6.24)##				(5.49)#
none	2307	8	8	2.47**	845	12	11	2.31**
some	160	2	3	-2.47**	108	2	4	-2.31**
Draft Pressure[a]				(40.12)##				(35.97)##
high	870	14	13	5.80**	372	18	18	5.64**
low	1597	5	5	-5.80**	581	6	6	-5.64**
IQ				(1.60)				(1.00)
low	175	12	9	0.43	202	17	14	1.59
medium	1018	10	9	1.88	202	11	10	-0.27
high	616	5	7	-0.96	20	10	12	0.27
NA	658	6	7	-1.22	529	8	9	-1.07
Residence[a]				(1.04)				(1.02)
NE Central City	160	5	4	-1.79	77	10	11	0.10
NE Other	431	6	7	-1.17	46	9	8	-0.55
NC Central City	193	7	8	-0.11	160	14	14	1.69*
NC Other	574	10	9	1.26	21	10	8	-0.38
South Urban	333	6	7	-0.98	311	10	10	-0.17
South Rural	399	9	9	0.50	291	10	10	-0.36
West	377	10	10	1.47	45	4	4	-1.44
NA					2	c	c	c
Health Problem[a]				(6.26)##				(0.03)
no	2217	8	8	2.49**	904	11	10	-0.16
yes	250	5	4	-2.49**	49	10	11	0.16

(Table continued on next page)

Table 13 continued

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
KOWW[d]				(0.66)				(1.68)
low	554	9	9	0.78	559	10	11	0.56
medium	1053	7	7	-1.27	297	12	11	0.36
high	819	8	9	0.64	82	6	4	-1.93*
NA	41	7	6	-0.36	15	c	c	c
SES				(0.68)				(0.32)
low	397	10	9	0.87	456	11	11	0.55
medium	900	9	8	0.60	303	11	9	-0.83
high	1095	6	7	-1.05	75	8	10	-0.17
NA	75	7	7	-0.46	119	12	12	0.44
Total or Average	2467							
Grand Mean			8				10	
$\hat{R}^2$			.03				.05	
F-ratio			4.26				3.26	

Universe: Mentally and physically eligible (not classified 4-F) respondents 21-27 years old in 1973 who were not discharged from the Armed Forces prior to 1966.

[a] The characteristic is measured as of the year of draft eligibility.

[b] Adjusted by multiple regression technique of holding constant all other variables shown in the table.

[c] Percentage not shown when the category contains less than 20 respondents.

[d] KOWW stands for "knowledge of the world of work".

# Statistically significant at the .05 level.

## Statistically significant at the .01 level.

* Category is significantly different from the grand mean at the .05 level.

** Category is significantly different from the grand mean at the .01 level.

Table 14 The Likelihood of a Non Exempted Young Man Serving in the Armed Forces during the Vietnam Era: MCA Results

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Education[a]				(5.74)##				(6.34)##
0-8	94	22	22	-1.58	95	12	18	-2.85**
9-11	322	30	26	-1.76*	253	29	30	-0.46
12	996	37	35	4.17**	407	40	39	4,64**
13-15	562	31	27	-1.88*	140	29	24	-1.88*
16	363	16	27	-1.09	48	15	18	-2.09*
17 +	130	12	28	-0.53	10	c	c	c
Dependents[a]				(21.07)##				(5.62)#
none	2307	31	31	4.49**	845	34	33	2.30*
some	160	8	15	-4.49**	108	15	22	-2.30*
Draft Pressure[a]				(223.16)##				(50.54)##
high	870	48	47	13.67**	372	45	44	6.67**
low	1597	20	21	-13.67**	581	23	24	-6.67**
IQ				(4.73)##				(5.29)##
low	175	38	30	0.06	202	40	35	1.32
medium	1018	35	33	2.56**	202	40	39	2.42**
high	616	26	31	0.54	20	45	46	1.49
NA	658	23	25	-3.18**	529	24	27	-3.35**
Residence[a]				(2.78)#				(2.67)##
NE Central City	160	29	30	-0.02	77	30	33	0.23
NE Other	431	28	30	0.18	46	22	21	-1.57
NC Central City	193	22	30	-0.04	160	34	33	0.54
NC Other	574	32	32	1.23	21	33	27	-0.49
Southern Urban	333	34	33	1.60	311	36	36	2.13*
Southern Rural	399	29	23	-3.30**	291	30	29	-0.74
West	377	30	31	0.77	45	11	14	-2.70**
NA					2	c	c	c
Health Problem[a]				(65.41)##				(2.57)
no	2217	32	32	8.00**	904	32	32	1.58
yes	250	9	10	-8.00**	49	18	22	-1.58

(Table continued on next page)

Table 14 continued

Characteristic	WHITES				BLACKS			
	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio	Number of Respondents	Unadjusted Percent	Adjusted[b] Percent	(F-ratio) t-ratio
Potential Wage[a]				(31.38)##				(3.17)#
low 0-$1.80	228	34	42	3.60**	289	30	33	0.47
medium $1.81-$2.50	1499	36	33	3.92**	406	35	33	0.58
high $2.51+	627	14	17	-5.94**	126	23	20	-2.18*
NA	113	28	33	0.45	132	30	34	0.24
Unemployment[a]				(37.58)##				(11.20)##
less than 10 weeks work experience	94	31	26	-0.93	68	25	23	-1.58
low	1188	27	24	-5.99**	385	29	26	-2.91**
medium	374	21	22	-3.75**	191	31	29	-0.72
high	148	18	21	-2.78**	88	20	23	-2.00*
NA	663	41	46	10.99**	221	43	48	6.04**
SES				(0.36)				(0.69)
low	397	31	30	0.03	456	31	32	0.37
medium	900	32	31	0.62	303	34	32	0.34
high	1095	28	30	-0.32	75	28	31	-0.14
NA	75	25	26	-0.51	119	29	26	-0.46
Total or Average	2467				953			
Grand Mean			30				31	
$\hat{R}^2$			.20				.14	
F-ratio			23.14				6.59	

Universe: Mentally and physically eligible (not classified 4-F) respondents 21-27 years old in 1973 who were not discharged from the Armed Forces prior to 1966.

[a] The characteristic is measured as of the year of draft eligibility.

[b] Adjusted by multiple regression technique of holding constant all other variables shown in the table.

[c] Percentage not shown when the category contains less than 20 respondents.

# Statistically significant at the .05 level.
## Statistically significant at the .01 level.
* Category is significantly different from the grand mean at the .05 level.
** Category is significantly different from the grand mean at the .01 level.

APPENDIX C

LOGIT AND MCA: A COMPARISON

The purpose of this appendix is to indicate the similarity between the MCA coefficients and those obtained through a logit analysis. All in all the logit and MCA techniques yielded similar results. Differences in the magnitude of the predicted results between the two methods were rare. Approximately 96 percent of the 308 possible comparisons were within five percentage points of one another. In addition, there was only one instance when the predicted direction differed.[1] Perhaps most importantly, the differences did not change the interpretation of the results. For example, the logit coefficients suggested that the impact of the hardship and health deferments among whites were stronger than the MCA adjusted percentages would suggest.

In order to make these comparisons it was necessary to transform the coefficients obtained through the two different techniques. The method of transforming the coefficients is discussed in the remainder of the appendix.

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[1] This excludes cases where the predicted direction was within two percentage points of zero.

The logistic model is of the following form:

$$\ln p_t/1-p_t = X_t'B \tag{1}$$

where:

B = vector of parameter coefficients

p = probability for the individual

X_t = vector of independent variables for the individual

From (1) one can derive

$$p_t = [1 + e^{X_t'B}]^{-1} \tag{2}$$

Differentiating p with respect to X_j,

$$\frac{\delta p_t}{\delta X_{jt}} = B_j[1 + e^{X_t'B}]^{-2} e^{X_t'B} \tag{3a}$$

$$= B_j p_t(1-p_t) \tag{3b}$$

where:

B_j = the jth element of B

X_{jt} = the jth element of X_t

Both B_j and p are unknown parameters and must be estimated. The B_j's are estimates using coefficients from the logit analysis. The method of estimating p is more complex.

The MCA technique permits one to calculate the mean value of the dependent variable for all categories of predictor variables. Each coefficient measures the "net" effect of that category (variable) upon the dependent variable, after controlling for the effects of all other predictor variables. For example when the dependent variable is dichotomous, the MCA technique allows one to calculate for each independent variable category, the proportion of that category which would have taken the value "1" on the dependent measure had the members of that category been "average" in terms of all other variables entering into the analysis.

Hence, it was necessary to evaluate the predicted proportions from the logit analysis in a way which would hold "average" all other categories. To do this p* was estimated by evaluating it at the mean of each independent variable.

$$p^* = [1 + e^{\bar{X}' b}]^{-1} \qquad (4)$$

where b is the vector of estimated logit coefficients and $\bar{X}'$ is a vector consisting of the sample means of all independent variables.

The logit analysis shown in this appendix are calculated substituting the estimates for the parameters of (3b) and evaluating $b_j p^*(1-p^*)$ where p* is found by evaluating (4).

The logit program requires that one of the categories be omitted when the predictor variable is described by a series of dichotomous variables. In contrast, the MCA procedure does not require that one of the categories for each predictor variable be omitted. Hence, it was necessary to transform the MCA adjusted proportions into deviations from the omitted category in order to make them consistent with the logit results. This was done using the following formula:

$$C_{ij} - C_{i\ \text{omitted}} = C_{ij}*$$

where:

C_{ij} = the adjusted percentage of category $_j$ of predictor variable i

$C_{i\ \text{omitted}}$ = the adjusted percentage of the category of predictor variable i which corresponds to the omitted logit

$C_{ij}*$ = the transformed MCA coefficient which corresponds to C_{ij}.

Table 15 Comparison of Net Relationships Between the Likelihood of Enlisting and Categories of the Explanatory Variables Using Logit and MCA Analysis

Explanatory Variables	WHITES				BLACKS			
	Total		Eligible		Total		Eligible	
	Logit	MCA[a]	Logit	MCA[a]	Logit	MCA[a]	Logit	MCA[a]
Education								
0-8	omit	omit	omit	omit	omit	omit	omit	omit
9-11	.01	.00	-.01	.00	.12	.08	.11	.09
12	.09	.09	.08	.10	.15	.12	.13	.12
13-15	.02	.02	.01	.03	.11	.07	.09	.06
16	.02	.02	.01	.04	.01	-.02	-.03	-.03
17+	-.06	-.02	-.07	.00	b	b	b	b
Dependents								
none	omit	omit	omit	omit	omit	omit	omit	omit
some	-.15	-.09	-.17	-.10	-.04	-.03	-.06	-.05
Draft Pressure								
low	omit	omit	omit	omit	omit	omit	omit	omit
high	.12	.15	.13	.16	.05	.05	.06	.07
Residence								
NE Central City	.01	.02	.02	.03	.02	.02	.07	.05
NE Other	.02	.02	.02	.02	-.03	-.01	.01	.02
NC Central City	-.01	-.01	-.01	-.01	.04	.04	.09	.06
NC Other	.01	.01	.01	.01	-.11	-.06	-.08	-.04
South Urban	.03	.04	.04	.04	.13	.14	.21	.20
South Rural	-.04	-.05	-.04	-.05	.12	.14	.20	.18
West	omit	omit	omit	omit	omit	omit	omit	omit
Health Problem								
no	omit	omit	omit	omit	omit	omit	omit	omit
yes	-.21	-.15	-.22	-.16	-.11	-.08	-.14	-.09
Ability								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	.03	.04	.01	.02	.07	.10	.08	.10
high	.03	.04	.01	.01	.16	.27	.19	.28
NA	-.01	-.01	-.03	-.03	.01	.01	.01	.02
Potential Wage								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	-.03	-.05	.04	.06	.04	.05	.05	.06
high	-.14	-.16	-.15	-.18	.04	.03	.05	.18
NA	-.14	-.14	-.13	-.16	.05	.04	.09	.16
Unemployment								
limited work experience	.04	.04	.03	.02	-.04	-.03	.02	.03
low	.01	.01	.01	.00	-.01	-.01	.00	.01
medium	.00	.00	-.00	-.01	.02	.02	.03	.02
high	.15	.18	.15	.16	.10	.13	.11	.12
NA	omit	omit	omit	omit	omit	omit	omit	omit
SES								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	.00	.00	.00	.00	-.01	-.02	-.01	-.02
high	.01	.01	.01	.02	-.06	-.07	-.07	-.07
NA	.11	.10	.10	.11	-.07	-.07	-.11	-.12

[a] These figures represent deviations from the omitted categories using the adjusted percentages found in Tables 5 through 7, Chapter Four and Appendix Tables 12 through 14.

[b] These results not shown when they represent fewer than 20 sample cases.

Table 16 Comparison of Net Relationships Between the Likelihood of Being Drafted and Categories of the Explanatory Variables Using Logit and MCA Analysis

Explanatory Variables	WHITES				BLACKS			
	Total		Eligible		Total		Eligible	
	Logit	MCA[a]	Logit	MCA[a]	Logit	MCA[a]	Logit	MCA[a]
Education								
0-8	omit	omit	omit	omit	omit	omit	omit	omit
9-11	.01	.02	.01	.01	.06	.04	.06	.04
12	.02	.03	.01	.01	.10	.11	.09	.10
13-15	.01	.02	.00	.00	.09	.09	.09	.08
16	-.05	-.02	-.06	-.04	.03	.04	.01	.03
17+	-.00	.01	-.01	.00	b	b	b	b
Dependents								
none	omit	omit	omit	omit	omit	omit	omit	omit
some	-.01	-.05	-.07	-.05	-.07	-.03	-.10	-.07
Draft Pressure								
high	.05	.07	.05	.08	.06	.11	.08	.11
low	omit	omit	omit	omit	omit	omit	omit	omit
Residence								
NE Central City	-.05	-.05	-.05	-.06	.03	.04	.05	.07
NE Other	-.02	-.03	-.02	-.03	.01	.03	.02	.04
NC Central City	-.02	-.02	-.02	-.02	.05	.09	.06	.10
NC Other	.00	.00	-.01	-.01	.02	.04	.02	.04
South Urban	-.02	-.03	-.03	-.03	.03	.06	.04	.06
South Rural	-.01	-.01	-.01	-.03	.03	.04	.04	.06
West	omit	omit	omit	omit	omit	omit	omit	omit
Health Problem								
no	omit	omit	omit	omit	omit	omit	omit	omit
yes	-.04	-.04	-.04	-.04	-.02	-.04	.00	.01
Ability								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	.01	.02	.01	.00	.00	-.01	-.02	-.04
high	-.01	.00	-.01	-.02	.00	.00	.00	-.02
NA	-.01	-.01	-.01	-.02	-.01	-.03	-.02	-.05
KOWW[c]								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	-.01	-.01	-.01	-.02	-.01	-.01	.00	.00
high	.00	.00	.00	.00	-.05	-.07	-.06	-.07
NA	-.03	-.03	-.02	-.03	b	b	b	b
SES								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	.00	.00	-.02	-.01	-.01	-.02	-.01	-.02
high	-.01	-.01	-.02	-.02	-.01	-.02	-.01	-.01
NA	-.02	-.02	.00	-.02	.00	-.01	.01	.01

[a] These figures represent deviations from the omitted categories using the adjusted percentages found in Tables 5 through [illegible], Chapter four and Appendix Tables 12 through 14.

[b] These results not shown when they represent fewer than 20 sample cases.

[c] KOWW stands for "knowledge of the world of work".

Table 17 Comparison of Net Relationships Between the Likelihood of Service and Categories of the Explanatory Variables Using Logit and MCA Analysis

Explanatory Variables	WHITES				BLACKS			
	Total		Eligible		Total		Eligible	
	Logit	MCA[a]	Logit	MCA[a]	Logit	MCA[a]	Logit	MCA[a]
Education								
0-8	omit	omit	omit	omit	omit	omit	omit	omit
9-11	.05	.04	.04	.04	.11	.11	.16	.12
12	.14	.14	.12	.13	.17	.21	.24	.21
13-15	.05	.06	.03	.05	.08	.07	.10	.06
16	.03	.05	.01	.05	.02	.00	.00	.00
17+	.01	.05	.00	.06	b	b	b	b
Dependents								
none	omit	omit	omit	omit	omit	omit	omit	omit
some	-.24	-.14	-.27	-.16	-.07	-.08	-.14	-.11
Draft Pressure								
high	.23	.24	.25	.26	.10	.16	.19	.20
low	omit	omit	omit	omit	omit	omit	omit	omit
Residence								
NE Central City	-.03	-.03	-.02	-.01	.09	.14	.17	.19
NE Other	-.01	-.01	-.02	-.01	.03	.06	.06	.07
NC Central City	-.02	-.02	-.02	-.01	.10	.17	.18	.19
NC Other	.01	.01	.00	.01	.07	.12	.11	.13
South Urban	.02	.01	.02	.02	.12	.19	.12	.22
South Rural	-.08	-.08	-.08	-.08	.07	.12	.10	.15
West	omit	omit	omit	omit	omit	omit	omit	omit
Health Problem								
no	omit	omit	omit	omit	omit	omit	omit	omit
yes	-.31	-.22	-.32	-.22	-.12	-.13	-.11	-.10
Ability								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	.06	.05	.03	.03	.04	.08	.03	.04
high	.04	.04	.01	.01	.06	.12	.09	.11
NA	-.02	-.02	-.05	-.05	-.03	-.06	-.08	-.08
Potential Wage								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	-.06	-.07	-.07	-.09	.00	-.02	.01	.00
high	-.23	-.23	-.26	-.25	-.07	-.12	-.11	-.13
NA	-.10	-.11	-.07	-.09	-.02	-.04	.03	.07
Unemployment								
limited work experience	.09	.07	.08	.05	.00	.00	.01	.00
low	.06	.04	.06	.03	.01	.01	.05	.03
medium	.03	.01	.03	.01	.04	.05	.08	.06
high	.29	.27	.29	.25	.15	.25	.24	.25
NA	omit	omit	omit	omit	omit	omit	omit	omit
SES								
low	omit	omit	omit	omit	omit	omit	omit	omit
medium	.01	.01	.01	.01	-.01	-.01	.00	.00
high	.00	.00	-.01	.00	-.02	-.02	-.02	-.01
NA	.00	.00	-.05	-.04	-.01	-.03	-.06	-.06

[a] These figures represent deviations from the omitted categories using the adjusted percentages found in Tables 5 through 7, Chapter four and Appendix Tables 10 through 14.

[b] These results not shown when they represent fewer than 20 sample cases.

APPENDIX D

A TEST OF OCCUPATIONAL INFORMATION

H. KNOWLEDGE OF THE WORLD OF WORK

67. *I'd like your opinion about the kind of work that men in certain jobs usually do. For each occupation on this card (Show Flashcard 1) there are three descriptions of job duties. Will you please tell me which description you think best fits each job? Be sure to read all of the possible answers before you decide.*

A-1. HOSPITAL ORDERLY

- 1 ☐ Helps to take care of hospital patients
- 2 ☐ Orders food and other supplies for hospital kitchens
- 3 ☐ Works at hospital desk where patients check in
- 4 ☐ Don't know – *SKIP to B-1*

A-2. How much regular schooling do you think hospital orderlies usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

B-1. MACHINIST

- 1 ☐ Makes adjustments on automobile, airplane, and tractor engines
- 2 ☐ Repairs electrical equipment
- 3 ☐ Sets up and operates metal lathes, shapers, grinders, buffers, etc.
- 4 ☐ Don't know – *SKIP to C-1*

B-2. How much regular schooling do you think machinists usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

C-1. ACETYLENE WELDER

- 1 ☐ Builds wooden crates to hold tanks of acetylene gas
- 2 ☐ Uses a gas torch to cut metal or join pieces of metal together
- 3 ☐ Operates a machine that stitches the soles to the upper parts of shoes
- 4 ☐ Don't know – *SKIP to D-1*

C-2. How much regular schooling do you think acetylene welders usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

D-1. STATIONARY ENGINEER

- 1 ☐ Works at a desk, making drawings and solving engineering problems
- 2 ☐ Drives a locomotive that moves cars around in a freight yard
- 3 ☐ Operates and maintains such equipment as steam boilers and generators
- 4 ☐ Don't know – *SKIP to E-1*

D-2. How much regular schooling do you think stationary engineers usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

E-1. STATISTICAL CLERK

- 1 ☐ Makes calculations with an adding machine or a calculator
- 2 ☐ Sells various kinds of office machines and office supplies
- 3 ☐ Collects tickets at sports events and other types of entertainment
- 4 ☐ Don't know – *SKIP to F-1*

E-2. How much regular schooling do you think statistical clerks usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

F-1. FORK LIFT OPERATOR

- 1 ☐ Operates a machine that makes a certain kind of agricultural tool
- 2 ☐ Operates a freight elevator in a warehouse or factory
- 3 ☐ Drives an electrical or gas powered machine to move material in a warehouse or factory
- 4 ☐ Don't know – *SKIP to G-1*

F-2. How much regular schooling do you think folk lift operators usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

G-1. ECONOMIST

- 1 ☐ Prepares menus in a hospital, hotel, or other such establishment
- 2 ☐ Does research on such matters as general business conditions, unemployment, etc.
- 3 ☐ Assists a chemist in developing chemical formulas
- 4 ☐ Don't know – *SKIP to H-1*

G-2. How much regular schooling do you think economists usually have?

- 1 ☐ Less than a high school diploma
- 2 ☐ A high school diploma
- 3 ☐ Some college
- 4 ☐ College degree
- 5 ☐ Don't know

H. KNOWLEDGE OF THE WORLD OF WORK -- Continued

67. H-1. MEDICAL ILLUSTRATOR

1 ☐ Hands tools and equipment to a surgeon during an operation
2 ☐ Demonstrates the use of various types of medicines
3 ☐ Draws pictures that are used to teach anatomy and surgical operating procedures
4 ☐ Don't know – *SKIP to I-1*

H-2. How much regular schooling do you think medical illustrators usually have?

1 ☐ Less than a high school diploma
2 ☐ A high school diploma
3 ☐ Some college
4 ☐ College degree
5 ☐ Don't know

I-1. DRAFTSMAN

1 ☐ Makes scale drawings of products or equipment for engineering or manufacturing purposes
2 ☐ Mixes and serves drinks in a bar or tavern
3 ☐ Pushes or pulls a cart in a factory or warehouse
4 ☐ Don't know – *SKIP to J-1*

I-2. How much regular schooling do you think draftsmen usually have?

1 ☐ Less than a high school diploma
2 ☐ A high school diploma
3 ☐ Some college
4 ☐ College degree
5 ☐ Don't know

J-1. SOCIAL WORKER

1 ☐ Works for a welfare agency and helps people with various types of problems they may have
2 ☐ Conducts research on life in primitive societies
3 ☐ Writes newspaper stories on marriages, engagements, births, and similar events
4 ☐ Don't know – *SKIP to 68*

J-2. How much regular schooling do you think social workers usually have?

1 ☐ Less than a high school diploma
2 ☐ A high school diploma
3 ☐ Some college
4 ☐ College degree
5 ☐ Don't know

68. What would you say is more important to YOU in deciding what kind of work you want to go into, good wages or liking the work?

1 ☐ Liking it   2 ☐ Good wages

Now I'd like your opinion on whether people in certain occupations earn more, on the average, than people in other occupations. By average, we mean the average of all men in this occupation in the entire United States.

69. Who do you think earns more in a year; a man who is:

a. 1 ☐ An automobile mechanic .... or 2 ☐ An electrician? .... } 0 ☐ Don't know
b. 1 ☐ A medical doctor .... or 2 ☐ A lawyer? .... } 0 ☐ Don't know
c. 1 ☐ An aeronautical engineer .... or 2 ☐ A medical doctor? .... } 0 ☐ Don't know
d. 1 ☐ A truck driver .... or 2 ☐ A grocery store clerk? .... } 0 ☐ Don't know
e. 1 ☐ An unskilled laborer in a steel mill .... or 2 ☐ An unskilled laborer in a shoe factory? .. } 0 ☐ Don't know
f. 1 ☐ A lawyer .... or 2 ☐ A high school teacher? .... } 0 ☐ Don't know
g. 1 ☐ A high school teacher .... or 2 ☐ A janitor? .... } 0 ☐ Don't know
h. 1 ☐ A janitor .... or 2 ☐ A policeman? .... } 0 ☐ Don't know

While answering Section H was another person present?

☐ Yes   ☐ No – *Go to Section I*

Would you say this person influenced the respondent's answers?

☐ Yes   ☐ No

The Center for Human Resource Research

The Center for Human Resource Research is a policy-oriented research unit based in the College of Administrative Science of The Ohio State University. Established in 1965, the Center is concerned with a wide range of contemporary problems associated with human resource development, conservation and utilization. The personnel include approximately twenty senior staff members drawn from the disciplines of economics, education, health sciences, industrial relations, management science, psychology, public administration, social work and sociology. This multidisciplinary team is supported by approximately 50 graduate research associates, full-time research assistants, computer programmers and other personnel.

The Center has acquired pre-eminence in the fields of labor market research and manpower planning. The National Longitudinal Surveys of Labor Force Behavior have been the responsibility of the Center since 1965 under continuing support from the United States Department of Labor. Staff have been called upon for human resource planning assistance throughout the world with major studies conducted in Bolivia, Ecuador and Venezuela, and recently the National Science Foundation requested a review of the state of the art in human resource planning. Senior personnel are also engaged in several other areas of research including collective bargaining and labor relations, evaluation and monitoring of the operation of government employment and training programs and the projection of health education and facility needs.

The Center for Human Resource Research has received over one million dollars annually from government agencies and private foundations to support its research in recent years. Providing support have been the U.S. Departments of Labor, State, and Health, Education and Welfare; Ohio's Health and Education Departments and Bureau of Employment Services; the Ohio cities of Columbus and Springfield; the Ohio AFL-CIO; and the George Gund Foundation. The breadth of research interests may be seen by examining a few of the present projects.

The largest of the current projects is the National Longitudinal Surveys of Labor Force Behavior. This project involves repeated interviews over a fifteen year period with four groups of the United States population: older men, middle-aged women, and young men and women. The data are collected for 20,000 individuals by the U.S. Bureau of the Census, and the Center is responsible for data analysis. To date dozens of research monographs and special reports have been prepared by the staff. Responsibilities also include the preparation and distribution of data tapes for public use. Beginning in 1979, an additional cohort of 12,000 young men and women between the ages of 14 and 21 will be studied on an annual basis for the following five years. Again the Center will provide analysis and public use tapes for this cohort.

The Quality of Working Life Project is another ongoing study operated in conjunction with the cities of Springfield and Columbus, in an attempt to improve both the productivity and the meaningfulness of work for public employees in these two municipalities. Center staff serve as third party advisors, as well as researchers, to explore new techniques for attaining management-worker cooperation.

(Continued on inside of back cover)

A third area of research in which the Center has been active is manpower planning both in the U.S. and in developing countries. A current project for the Ohio Advisory Council for Vocational Education seeks to identify and inventory the highly fragmented institutions and agencies responsible for supplying vocational and technical training in Ohio. These data will subsequently be integrated into a comprehensive model for forecasting the State's supply of vocational and technical skills.

Another focus of research is collective bargaining. In a project for the U.S. Department of Labor, staff members are evaluating several current experiments for "expedited grievance procedures," working with unions and management in a variety of industries. The procedural adequacies, safeguards for due process, cost and timing of the new procedure are being weighed against traditional arbitration techniques.

Senior staff also serve as consultants to many boards and commissions at the national and state level. Recent papers have been written for the Joint Economic Committee of Congress, The National Commission for Employment and Unemployment Statistics, The National Commission for Manpower Policy, The White House Conference on the Family, the Ohio Board of Regents, the Ohio Governor's Task Force on Health, and the Ohio Governor's Task Force on Welfare.

The Center maintains a working library of approximately 6,000 titles which includes a wide range of reference works and current periodicals. Also provided are computer facilities linked with those of the University and staffed by approximately a dozen computer programmers. They serve the needs of in-house researchers and users of the National Longitudinal Survey tapes.

For more information on specific Center activities or for a copy of the Publications List, write: Director, Center for Human Resource Research, Suite 585, 1375 Perry Street, Columbus, Ohio 43201.